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An Address
ENTITLED
THROUGH THE MAZE OF MEDICINE.

Delivered at the Scientific Medical Conference, University of Rochester, N.Y., on Oct. 26th, 1926,

BY ANDREW BALFOUR, C.B., C.M.G., M.D. EDIN.,
DIRECTOR OF THE LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE.

AT the eleventh hour Dr. Rhees asked me if I would come to Rochester and deliver an address in the place of Dr. Charles Martin, Director of the Lister Institute, who, unfortunately, was unable to visit America. Faced by this honourable yet onerous task, I found myself somewhat in a dilemma, for pen had to be put to paper when crossing the Atlantic, when I would be divorced from nearly all works of reference. It was clear that a strictly scientific paper was an impossibility, for there was no means of verifying facts and figures. However, the Atlantic itself furnished a clue, for the thought of a great ship like the *Leviathan* threading its way, under guidance, through a maze of waters to a desired haven led me to think of the student of medicine. Not that I would for a moment compare the average medical student to the *Leviathan*. The latter is very rapid, luxurious, presumably out to make money, indeed, many things a medical student should not be, but just as a ship on her maiden voyage leaves a home port, traverses charted waters, encounters buffetings and difficulties, yet eventually gains her objective, so the medical student ventures forth upon what we may call the maze of medicine and usually, despite trials and troubles, chiefly in the shape of examinations, makes good and is let loose upon a confiding public.

A MEDICAL EDUCATION.

It, therefore, occurred to me that it might be well to trace his wanderings through the maze. The maze itself has been the subject of careful consideration and criticism by Sir George Newman, who, in his two masterly studies, "Some Notes on Medical Education in England," published in 1918, and "Recent Advances in Medical Education in England," which appeared in 1923, has said practically all that can be said upon the matter. The second memorandum is a brilliant and fascinating piece of work, philosophic and humane, yet practical and inspiring, wherein a wealth of illustration is employed. It is, indeed, a classic utterance. It would be presumptuous, as well as useless, for me to intrude into Newman's field but, as he views the maze from the standpoint of an expert and administrator, I think it may be of interest in the first place to try to stand in the shoes of the medical student and see how he, with his limited outlook, is impressed by his new surroundings. It is not easy to do so, at least for anyone who was a medical student many years ago, for it is hard to recapture the elusive past, and, in addition, the inexorable process of evolution has imposed changes and advances of which one is not fully cognisant.

In the second place, while Newman has in yet another brochure pressed for the permeation of the medical curriculum with the preventive idea, and has indicated on broad lines how this should be accomplished, there would seem to be room for discussing in some little detail this new guide-rope which it is desired to introduce into the maze, this guiding principle which is intended to lead the student of to-day and to-morrow towards an objective, differing in some ways from that upon which the ambition of his predecessors has been set, an objective designed to make him not only a better doctor, but a more useful citizen, and to enlist his brains and knowledge in the service of the State, as a guardian of the public health.

Now it is a strange thing how little the lay public realise all that is comprised in a medical education. I fancy the parents who pay the fees are better acquainted with its magnitude, if not its complexities, than anyone else. Years ago at Khartoum, in the Sudan, Lord Kitchener paid a visit to the Gordon Memorial College, and along with Mr. (now Sir James) Currie I had an interview with him. He declared himself satisfied with what was being done at the Wellcome Tropical Research Laboratories of the Sudan Government, and asked if I thought the native students were profiting by the education given them at the College which was, in fact, really a secondary school. I said I thought they had made very good progress and had been well grounded. "Very well," he remarked, "I want you to go a stage further and turn out native medical officers. I give you two years in which to do it." "What you ask is impossible," I replied. "The word impossible is not in my vocabulary," he said, very emphatically. "Nor, as a rule, Sir, is it in mine," I ventured to retort, "but in this case what you ask *is* impossible. Do you know what course these boys would have to go through?" "Tell me," he said, and I told him in detail and could see the surprise come into his impassive countenance. It would take too long to recount our conversation, which had its humorous side. Suffice to say that Lord Kitchener abandoned his idea for the time being. However, as you may know, in memory of that great soldier and organiser there now exists a medical school in Khartoum where the Sudanese are trained to be doctors, but the curriculum is not limited to two years.

At present, however, I am not so much concerned with the length of the medical curriculum, which would seem to have reached its limit, as with its object and its general effect upon the student who, greatly daring if he only knew it, plunges sometimes unheedingly and thoughtlessly into *res medicæ*. I find myself a little at a loss in speaking to you, for I am not fully acquainted with the details of medical education in the United States. True, I have studied Flexner's book, I have also read "Martin Arrowsmith," and pondered over it, but I take it that Sinclair Lewis is scarcely an authority on medical education, although he can portray effectively certain aspects of it.

Hence, in dealing with the maze of medicine I have in mind rather the course of studies pursued by the medical students in the schools and universities of Great Britain, but believe that this does not greatly differ from that followed in the best centres of medical education in this country, while, from the point of view of the effect of his studies on the student, human nature, I take it, is much the same all the world over, and in any case there is a measure of kinship between the sons of the United States and those of Great Britain which suggests that their viewpoints cannot be vastly dissimilar. Speaking generally, it may be said that in both countries the medical student passes through the maze, guided on broad lines by the Dean of the Faculty, in details by his teachers, in many things by his fellow-seekers after knowledge, and that, at present, the link which binds together, often very loosely, the various subjects he has to study, is of a biological nature. His outlook is coloured by biology, using the word in its widest sense, although he himself may not be conscious of it.

THE STUDENT'S FIRST IMPRESSIONS.

For the purposes of our argument let us take the young student who has done little or no biology at school, and who, therefore, on beginning medicine, has to take up botany and zoology. He finds himself in a new world, the world of life viewed from the standpoint of the scientist. It is difficult for him to adjust his ideas. Not only are the terms used strange to him, the processes employed novel, the new facts a revelation, but, unless his teachers are very wise men, he sees at first everything as through a glass darkly, and is inclined to ask, "What's the use of all this to a doctor?" Botany proves, as a rule, more irksome than zoology, for vascular bundles do not appeal to him, and the study of natural

orders seems a mere waste of time. I think as a rule he appreciates the value of the training in technique in the practical work of the laboratory, but field excursions, save as an outing, are not attractive. I have often heard a student complain that he was taught all about the insides of plants and how to classify them, but was never told how to recognise the common trees and shrubs and flowers of his own country. This shows that the medical student tends to look upon botany, not as a means to an end, but as a well-defined subject, the cultivation of which should lead to botanical fruits. Even though he is studying zoology along with it, he does not see that, as Newman says, the two subjects are complementary to one another. Still less does he grasp the part that botany plays in the general scheme of his education, though it is significant that his interest quickens when those lowly forms of vegetable life, the bacteria, are presented to him, and when he is introduced to plants with medicinal and poisonous properties.

Whether it was due to the fact that I was not well taught, or that, having commenced the study of medicine at the age of 16, my intelligence was at fault, I cannot say, but I remember getting one of the shocks of my life at a zoological demonstration when the man sitting next to me nudged me in the ribs and said in a loud whisper, "That's a human tongue!" It was not only that I was brought unexpectedly for the first time into contact with the human cadaver or a portion of it, though I remember that my imagination ran riot about that tongue and its whilom possessor, but that I suddenly realised there was a close link between man and the brute creation. The human tongue, being comparatively large, was being used to demonstrate certain features of a rabbit's tongue, and ever since I have thought that while, as a rule, comparative anatomy is made to pave the way towards human anatomy, it would be well at times to reverse the process in a student's first year and, by making use of human parts, to teach the great lesson of evolution and relationship.

How important it is at this stage for the student to become familiar with Darwin's "Origin of Species"! Without it, even when well taught, he is apt to miss the true significance of his zoological studies, and, as Milton has it, "in wandering mazes lost" perceive no end. Says Newman, "if the medical man be not a biologist he is nothing," but too often he gets little chance of becoming a true biologist, being wearied by "types." He passes from the earth-worm to the snail, from the snail to the frog, from the frog to the skate and dog-fish, thence to the rabbit, and is apt to regard such as a delimited stage in his progress to an examination, rather than as an integral part of his life's work. True, things are changing for the better, but even yet the student tends to grope blindly, content to meet the immediate future.

The First Year Subjects Fundamental.

The teaching of physics, apart from biophysics, is nowadays very largely a function of the secondary school. I will not discuss the student's attitude towards it, but hope later to consider how it may be made the means of impressing the preventive idea upon his plastic mind. There are medical students who take kindly to chemistry. They are usually men with a mathematical bent, to whom the exactitude of the science appeals. To many chemistry is summed up in the word "stinks." In the past I think chemistry more than any subject has been divorced from medicine. It is true the student comes across substances which figure in the Pharmacopœia or are used as poisons, and rejoices accordingly. It is true he learns something of chemistry in industrial life and hears something about the chemical aspect of trade hazards, but, until recently, he was not taught to realise that chemistry in some form or other will follow him all through his course. If biology is the foundation of medicine, as Newman asserts, chemistry is one of its main props. Happy the first-year student who has, as at Edinburgh, a course of medical chemistry provided for him, arranged as a preparation for a future course of physiological chemistry. Too often the student views chemistry as a stumbling-block. His one desire is to get through with it and take up "real" subjects, as he calls them. To a certain extent attracted by the practical work which has something of the occult in it, he yet shies at equations as a horse at a gate, and resolves that, if only he passes, he will relegate the subject to the limbo of forgotten things. It may be that this is no longer the case, but it was so in my day, and there were I think, few students who understood that the subjects of their first year—chemistry, physics, and biology—were fundamentals, and represented the platform on which had to be built that training in science, in scientific thought and method, which is essential if medicine is to be other than mere empiricism and quackery.

Training in Anatomy.

Anatomy comes next, and in all probability the effect of the first contact of the student with the dissecting-room is never wholly effaced. Some men tremble without the door, others of tougher fibre betray no trepidation, but though, ere long, students may, as at Cambridge, speak lightly of "the meaters," to many the anatomy rooms mean their first contact with death. For a space there is a mystery about the sheeted figures, so stiff and silent, and though it passes, I am inclined to think his experience of them gives the "medico" his first sense of power. He begins to imagine that he is set apart for special work. When he dons his apron and takes in hand the scalpel he feels the rubicon is passed, and that he has in some measure become a priest of the craft of healing.

As the wonders of the human body are revealed anatomy becomes so engrossing that the student is apt to become unduly immersed in details. He has got hold of facts, and for a time their memorising seems to him a satisfactory and excellent thing. There is danger of the anatomy room becoming a mere valley, both of dry bones and dry facts with no quickening influence, nothing to link it to other branches of study. Newman, Keith, and others have dealt fully with this peril and its remedy, but it may not be easy to wean the student from the habit, easily acquired, of amassing facts and forgetting principles. Does the study of anatomy coarsen the mind? In some cases this would seem to be the case, for a time at least. Familiarity with the dead may breed some contempt for the living, but there are counteracting influences, and, to any student worth his salt, the marvels revealed by dissection should eventually bring a sense of humility and admiration, coupled possibly with wonder and pity that so delicate a mechanism as the human body is doomed to destruction and decay.

Physiology the Institutes of Medicine.

I have always thought that my old teacher, William Rutherford, "Bilirubin" as he was nicknamed after the bile-pigment he discovered, was in the right when he insisted on calling his subject the "Institutes of Medicine" instead of physiology. If physiology were always so regarded and taught the student would find this part of the maze easier than he usually does, and would perceive light ahead. If the maze be properly constituted there should not only be light ahead, but a certain refulgence behind him, proceeding from those parts of the maze he has already traversed. All the subjects he has been through should, as it were, unite in casting a beam of light on physiology, for here the student, now familiar with the dead body, contrasts it with the living. I think that apart from the histological side of the study, no subject of the course is at first so bewildering as physiology. There are so many side lines. The student has not only to grasp the mechanism and aim of the functions of the body as a whole, but, let us hope, with some recollection of physics in his mind, he must apply that subject to life and movement and consider also various

electrical reactions of the tissues. Physiological chemistry, or, as nowadays we may term it, biochemistry, which includes metabolism and endocrinology, will soon remind him that the time spent on chemistry, especially in its organic aspects, has not been wasted. Biomechanics will again remind him of his physics and will couple his physical with his anatomical knowledge. The physiology of the special senses will take his mind back to the anatomy theatre and the dissecting-room, and will once more show him how a knowledge of physics is essential to the proper understanding of such delicate mechanisms as, let us say, the eye and the ear, while his excursions into the comparatively young but all-important science of psychology should make him realise that while all thought processes centre in the brain which he has sliced and teased and sectioned, there is something intangible and elusive which, fortunately for himself, he can now liken to the wireless, and which may give him a wider conception of man's meaning and future. Lastly, when he applies his physiological knowledge in the laboratory upon the frog, upon the mammalia, there will dawn upon him a sense of the marvellous scheme of life, of its completeness as well as of its variety, of its inter-relations, of its correlations, of the smoothness and elasticity with which the body functions, of its extreme delicacy, of its marvellous strength, of its recuperative power.

Physiology is like a central chamber in the maze wherein all the other tracts he has been exploiting meet and mingle, and from which other tracts emerge. At first, confused by its very spaciousness, the student struggles to grasp its significance, but once he has got to grips with it his future is, or should be, secure, for, from this rallying ground, light beams along every tortuous out-going channel of the maze of medicine and more especially penetrates those which bear the designation "clinical."

The Principles of Pathology.

"Bugs" and "Drugs" are what the irreverent student sometimes calls the two subjects to which he is introduced when anatomy and physiology are behind him. It is rather significant that he classes pathology under "bugs," giving prominence to its bacteriological side. If he imagines, however, that bacteria and bacterial processes dominate the whole of pathology he will have a rude awakening. Sir Arthur Keith, in a recent lecture, recommended the student to pay an occasional visit to the post-mortem room while studying anatomy. It was sage advice, but most students never see what have been called the "doctor's failures," those tragic forms from the wards, until they have begun to wander through that part of the maze, a very large and intricate part, where they learn about tiny visible and invisible foes of man and discover what a mess disease can make of the form and functions of the wonderful mechanism of which they themselves are examples. The student, as a rule, takes kindly to this "science of morbid processes," as Newman aptly names it. For one thing, the bacteria are interesting and tangible. Most folk have a little of the farmer or hunter about them, relics of ancient days and forbears, and so it is pleasant to cultivate cocci and bacilli and to search for them in the blood and organs of some hapless guinea-pig or rat. For another the student renews his acquaintance with the pathogenic protozoa, parasitic worms, and noxious insects, is reminded of their complex life-cycles, and begins to understand how important they are, especially in the romantic domain of tropical medicine. Yet again he sees under the microscope sections of tissues with which he is familiar, altered sometimes out of all knowledge, while in the cadaver he witnesses the gross manifestations of disease. If his course is well ordered, however, he will also be given an opportunity of studying pathology in the living. Prof. Dean, of Cambridge, has said with truth, "Pathology, if it is to be the useful reality it ought to be to the student and graduate, must be learned in the wards, as well as in the post-mortem room and the laboratory." This, therefore, is a very interesting stage in the journey through the maze, for the student comes in contact for the first time with the living patient, and he also handles and sees the human shell from which the vital spark has but recently fled.

Preparation for Clinical Work.

It is true that if, like a wise man, he has taken some more of Sir Arthur Keith's advice, he will have already attended an operation or two in order to extend his anatomical experiences, but that is not quite the same thing as standing by the bedside of a patient and noting, perhaps, how yellow is his skin and that there is an ominous fullness in the right hypochondrium below the costal margin. This first incursion into wards and dead house cannot fail to leave its mark on the student's mind. Well it is for him, if now, and later when his clinical work commences, the humane side of him comes uppermost. There is a type, hard and keenly scientific, which comes to look upon the patient as a case, even as a museum specimen. This type may make a good pathologist, but he will never be a great doctor. No man can be a successful clinician if he is void of sympathy, and if he does not consider his client both from the psychical and the physical standpoint.

One cannot follow this section of the maze throughout all its ramifications, but the student will find once again that chemistry comes into the picture, and that from the diseases of the lower animals he may learn much that has a bearing on human pathology. "Drugs," in the old sense of the word, have gone out of fashion. We live in a world of tablets, of vaccines and sera, of endocrine preparations, of diet restrictions. We have harnessed the sun to our own uses, and even imitate the lord of light. Electricity and radium are drugs nowadays, and there are various other developments of which the student must have more than a smattering. Thirty or forty years ago he found the materia medica part of the maze simple enough but more than a trifle dull. Now he certainly cannot complain for lack of variety and presumably he appreciates the fact that both pharmacology and therapeutics are linked up with his previous studies, and most strongly linked by the biological chain. And so, gradually, in some ways almost insensibly prepared for it, the student reaches the most fascinating but the most intricate part of the maze of medicine. In some of the British schools he passes first of all through a kind of intercepting chamber, devoted to purposes of coördination, a place where he gets a breather before his final plunge, can take stock of his surroundings, and of his past, and not only have a refresher course in anatomy, physiology, and pathology, as applied to medicine and surgery, but undergo a short period of training in clinical methods, including case-taking, to fit him for his immediate duties. In my day at Edinburgh this took the form of what were called clinical tutorials, which were held in the evening, and the students found them most helpful, even though they did not precede, but were concurrent with, the work in the wards. Now the idea has undergone great expansion and modification, and it must be infinitely easier for the student to approach the bedside. In the old days some of us, young and callous, suddenly plunged into surgical wards as dressers in our second year of the maze, felt uncomfortably like humbugs, and, though possibly we did no great harm, it is unlikely either we or our cases derived much benefit from the contact.

At this stage the student, unless warned, is apt to forget that he is no longer dealing with disease as a separate entity, but with disease which has invaded not only the human organism, but a personality. He must be taught to think not in terms of the disease but of his patient, and for that purpose he must realise that the person, now sick, is a product of his past environment, which has probably been complex, and that the patient, himself complex, may, or probably will, so modify the disease which has laid

hold upon him that its bold outlines as recalled from pathological studies will no longer be apparent. If he does not grasp the significance of this truth, and still more the fact that vital processes control drug actions, he will certainly go astray, especially when he starts to treat his cases. In this part of the maze he will, so to speak, bump up against both in-patients and out-patients, and he will also learn the value of nursing and of the efficient nurse. Not a few medical students regard the staff nurse with respectful awe second only to that in which they hold the "chief." The same feeling, however, does not usually extend to the probationer.

What of surgery? I remember it was quite a considerable time before I plucked up courage to go and see an operation, even though I hail from Scotland and had paid a hospital fee! Eventually I selected for my first plunge an enucleation of the eyeball, which I witnessed (save the mark) from a back seat in a large theatre. I take it quite a few students suffer from a similar timidity. What saved me was an amputation of the leg, which had perforce to be performed on an accident case during a crowded out-patient clinic from which I could not escape, and what helped me through the ordeal, for such it seemed, was my knowledge of anatomy. Here is an illustration of another way in which the value of linking subjects together can be manifest. Pray pardon these personal reminiscences. I make use of them only to give point to the arguments advanced.

In connexion with his surgical course the student is now trained in the nature and use of anæsthetics in a manner which did not previously exist. To many a man this must come as a boon and a blessing. It is no use, indeed, it is fatal, to leave any branch of practical work to the student's own initiative. There are some who have none, there are others in whom diffidence masters initiative, there are yet others who are the slaves of slackness.

THE MAZE THICKENS.

It is now that the student discovers that he must begin to reason in a way he has never done before. He finds himself up against most difficult problems, and very soon discovers that guessing is dangerous. He has to proceed along definite lines of inquiry and exclusion, and, as he does so, he will find again how all his stores of knowledge can now be drawn upon as occasion requires, and if he has the necessary breadth of vision it will be apparent to him why he has had to struggle so long in the intricacies of the maze, and he will begin to feel that not far off he will round the last corner and be free. He is fortunate if, once he has made some progress in his clinical studies, he gets a chance to put precept and observation into practice as, say, in dispensary practice under supervision, where he comes into contact with his patients in their own homes, and learns more of human nature, its makeshifts, trials, sorrows, vices, and virtues, than he can in any hospital ward or out-patient department. There, also, perhaps, for the first time he will get some inkling of social problems and realise the need for safeguarding the public health. Dispensary practice or no, he will have to visit the humble homes when he attends obstetric cases, and it may be said that almost a new world opens to him when he enters, perhaps fearfully, that part of the maze which traverses the fields of midwifery and gynæcology. To many a male student this is a difficult and not altogether congenial part of his wanderings, but possibly that is because there has, in the past, been a comparative failure in the methods of teaching it. How this may be remedied is set forth by Newman in the second of his treatises and, as I must return, though briefly, to the subject a little later, I need not here say more. My own experience is so limited that it is scarcely fitting that I should enlarge upon the theme.

I think most students enjoy the short course in medical jurisprudence. There is an element of the dramatic in it, with tragedy well to the fore. Quite apart from its medical aspects, which can be rendered very impressive if linked up with the work of a police surgeon, the student, now probably approaching man's estate, has an opportunity of learning something about the machinery of law, and criminal law is infinitely more interesting than public health legislation, concerning which at this time he also gets an inkling.

He is fortunate if he gets more than an inkling into the huge subject of preventive medicine. However, even at this late stage in his medical career, he may have an opportunity of grasping the cardinal facts that curative and preventive medicine cannot be divorced from one another, and that, as a practitioner, he will have duties both towards his patients and the State which it is imperative that he should fulfil to the best of his ability.

THE STUDY OF SPECIAL SUBJECTS.

No good object will be served by talking about the study of special subjects, amongst which one does *not* class diseases of children, for that should be an integral part of the medical curriculum. In practice perhaps half the doctor's patients will be "sick kids," and as, for the elucidation of their complaints, it is necessary to know how to approach and handle them, and as there are maladies peculiar to childhood, and as ordinary diseases assume in children forms different from those they present in the adult, and as the doctor must treat the patient and not the disease, it seems criminal to grant a medical degree to any man who has not been instructed in pediatrics. Furthermore, the contact with child life is for the student a useful, and let us hope, usually a beneficial experience which will stand him in good stead in years to come.

As he emerges into the open ready for cap and gown, degree, or diploma, relieved, but with a new sense of responsibility, it will be to his advantage if he realises he has only escaped from one maze to enter another, one more spacious, perhaps, but none the less puzzling, and it is a maze likely to last him all his life if that be passed in the practice of his profession. Yet before he enters it I think it would be well if he were conducted into an annexe to the original maze with the words "History of Medicine" placed above it, an annexe where he might profitably spend a little time in study and from which he would come a wiser and more humble man, able and willing to subscribe to the words of England's last great Poet Laureate:—

> "Yet I doubt not through the ages one increasing purpose runs
> And the thoughts of men are widened with the process of the suns."

THE PREVENTIVE IDEA AND ITS APPLICATIONS.

You will remember how, in the second place, it was proposed to discuss how Sir George Newman's idea of permeating the medical curriculum with the preventive idea could best be carried into effect. In the short time at my disposal I can, of course, merely touch lightly on the subject which is one of considerable complexity and difficulty. Newman's plea has found support both in Great Britain and the United States, but, in one respect, the younger country has gone further than the older, for, in the person of Prof. W. S. Leathers, the Vanderbilt University, Nashville, Tennessee, aided by a grant from the Rockefeller Foundation, has appointed someone charged with the duty of superintending the permeation. I had an opportunity of talking things over with Prof. Leathers when he was in London, and it was clear that all would not be plain sailing. The medical student of to-day has so much both to ingest and to digest that it is very easy to overload the curriculum and precipitate a crisis. Again, in some instances we have to do with "blind leaders of the blind." The teachers themselves are not fully versed in preventive principles. How Prof. Leathers has faced his problem I do not know. I only wish he were here to tell us. I think the difficulty of inculcating the preventive idea is easier at the beginning of the

medical course than during its later stages. In this part of the maze one can see here and there strands of another guide-rope than that marked biological. In other words, at present, in subjects like physics, chemistry, and zoology the instructors draw some of their examples from matters closely concerned with the public health. Many of the principles they enunciate play a part in preventive medicine, and sometimes all that may be required is to lay stress upon them from the standpoint of the hygienist, remembering that under the title hygenist the student and exponent of sociology and eugenics is included. The teacher of physics can easily direct the student's mind along preventive grooves, or, to keep to our original simile, see that he grasps the new guide-rope in the maze. When he teaches the use of meteorological instruments he can discourse on the prophylactic uses of climate, when he expounds certain laws of humidity and air movement he can remind his hearers of what adequate ventilation means to health, especially, perhaps, in certain industries, when he touches upon hydraulics he can find useful illustrations from engineering practice in water-supply and sewage disposal. During the study of electricity he may cite the effects of electrical disturbance upon white men in the tropics, and the beneficial effect of thunderstorms. Under dynamics he can consider the human body as a machine and show how certain exercises will ward off certain deformities. These are but a few suggestions. It is evident that they can be multiplied but never *ad nauseam*, for any sound argument which will impress upon the student thus early the value of prevention of disease is to the good, and, in any case, it is likely to make his physics more attractive and his study of public health easier when he comes to it.

Chemistry, both inorganic and organic, offers a good opportunity to the apostle of preventive medicine. Take the dangerous trades and the use of poisonous substances in various kinds of industries. A disquisition on the prevention of lead poisoning can be made full of interest and at the same time furnish chemical instruction of value. A subject like your tetra-ethyl-lead problem in the States might be turned into a useful lesson. Excellent prophylactic ideas can, as they say in the States, be "sold" the student during a consideration of the chemistry of air and water. The mercurials and organic arsenicals can be made to furnish a sermon on the prevention of venereal disease, though, perhaps, this is dangerous ground over which to lead a student in his first year of medicine. Yet if the lay public are instructed, why not the youthful disciple of Æsculapius? The chemistry of carbon conjures up coal and smoke, and at once smoke-prevention and all the lessons to be learned from it give zest and life to the lecture. These are very obvious directions, probably to some extent exploited at present, but there are other avenues. What of the lime salts and questions of dental hygiene and the warding off of rickets? What of preservatives in food? What of nitrogen in sewage sludge? What of chemical substances, like Schweinfurth's green and "stoxal," used in the destruction of insect vectors of disease? It is, of course, inexpedient to give lengthy disquisitions on these subjects. They should be used as an electric torch is used to illuminate and to show what lies ahead. It is like the art of the impressionist, but, if properly practised, it should not fail of its effect.

In zoology it is easy to find themes, but in a more indirect way, perhaps, that is to say by a careful selection of types during the study of which reference can be made to their importance in medical work and indications given of how their ill-effects can be obviated. As examples take under the protozoa, the amœbæ; under the insects, the mosquito; under the helminths, the hookworm. As a matter of fact, there is at Edinburgh University, for the third-year student, a special short course in medical entomology and parasitology, which affords abundant scope for talking about prevention. But in zoology there are other ways of spreading the gospel of prevention. The rabbit is one of the types always in evidence, and there can be no harm in telling the student about the discovery of tularæmia, and how its spread may possibly be checked. His interest in the rodent is likely to be quickened thereby. Similarly, if he dissects a mollusc like a mussel or a snail, he should be told, on the one hand, how edible shell-fish may spread disease and how they can be safeguarded, and on the other he may learn the important rôle of certain water snails in some helminthic maladies, and how snails can be slain with copper sulphate, if indeed he has not already learned this fact during his chemical studies.

At this early stage the thing must be carefully done, or the student will be crammed with ill-digested facts, and will become the prey of that half-knowledge which is so dangerous. As a forgotten poet once said:—

"Be ignorance thy choice where knowledge leads to woe."

Botany does not lend itself so fully to the illustration of the preventive idea, but lessons can be drawn from it, even apart from those suggested by the bacteria which, indeed, are better left until pathology is tackled. So far as tropical hygiene is concerned, botanical knowledge has its uses. There is the question of the flora associated with the prevalence of the tsetse-fly, there is the planting of eucalyptus and sunflower to dry swampy ground, there is the rôle of the Bromelias and other epiphytes as mosquito nurseries, there is the question of mosquitoes breeding in the tops of coconut palms and the action of azolla, lemna, bladder-wort, and other aquatic plants on culicine life and activity. The hygienic uses of certain grasses can be discussed along with the Graminaceæ, reference may be made to the old practice in India of clearing water with the fruits of *Strychnos potatorum*, the value of the water chestnut in averting famine may be cited. The edible fungi will suggest the measures to be taken to avoid the poisonous and inedible, while the transpiration and respiration of plants and the shade properties of certain trees may bring up the subject of aboriculture in towns. Again, is there not the question of the traveller's palm and the baobab with their reservoirs of drinking-water, the barrel cactus of Mexico, and the wonderful Narra fruit of Damaraland which saves the Hottentot there from extinction.

Anatomy can easily be turned into a quarry from which ideas on preventive medicine can be delved and shaped. There is the question of posture and all that it implies. Once again the lime salts come to the fore, and with them and also apart from them the hygiene of dentition. The skin makes a good text, both as regards Besredka's new ideas on immunity and with reference to light and pigment, while chest expansion, the prevention of fibrositis and other forms of rheumatism, the prophylactic value of certain forms of exercise upon muscles, the guarding against eyestrain, and hundreds of other questions hinge upon anatomy.

What is true of anatomy is, of course, even more true of physiology. There is the whole vast subject of industrial hygiene in which physiology plays a prominent, indeed a pre-eminent, part, and to which the student's attention may from time to time be directed with advantage; there are the physiological problems associated with the hygiene of infancy, childhood, puberty, and adolescence. The preventive rôle of hormones, the functions of vitamins, especially in warding off the deficiency diseases, the question of protecting the heart, lungs, and kidneys from strain, all merit attention. Then there are preventive lessons to be drawn from the study of the higher functions and of the special organs of sense. And so on; it would take much too long a time even to mention all the possibilities, but I cannot help thinking that, despite the wealth of examples, it may perhaps prove more difficult to permeate the physiology course with the preventive idea than any other branch of study, and this largely because the

average physiologist is so immersed in the fascination of his subject that he is apt to regard it as the acme of existence, not as a means to an end. Moreover, the type of mind which takes to physiology is rarely that which is attracted by the wider issues of public health, though there are notable exceptions. If, however, the physiologist will look upon his subject, as, in some measure, a combination of the Institutes of Medicine with the Institutes of Hygiene he will have unrivalled opportunities for reminding his class that there is a Latin maxim which says *Qui non prohibet quod prohibere potest, assentire videtur.* "He who does not prevent what he has power to prevent, is regarded as assenting to it."

THE CLUES.

From this part of the maze onwards it is easy to place the new guide-rope in position. The study of bacteriology teaches many lessons in prevention on which we need not dilate. Is not immunity and all it predicates the very essence of prophylaxis? During his pathology studies the student can be led to see, not only how important it is to prevent disease altogether, but to grapple with it at the outset. The history of cancer may be adduced to point the moral. Again, the study of intra-uterine pathology will pave the way for further conceptions later in the curriculum, while he can also be made to see in many instances how the pathological processes of old age may be held in abeyance. Preventive measures in the case of comparative pathology may be cited to good effect, considering that so many parasites and diseases of animals are transmissible to man. Once more the hygiene of industry comes into the picture and, indeed, on every side lie lessons ready for use.

No longer can anyone say that materia medica and therapeutics are the handmaidens of curative medicine alone. They have now a much wider application. Indeed, pharmacology nowadays is as much concerned with the prevention as with the cure of disease. We know that the administration of certain drugs can and does prevent the development of a malady, the virus of which has been implanted in the human body. We know that timely exposure to sun and fresh air is a protective measure of great importance. Psychotherapy is best employed as a form of mental hygiene, while vaccines and sera are, generally speaking, more valuable as prophylactic than as curative agents.

What better example of preventive medicine can there be than the Pasteur method for rabies and its recent application to the dog?

Sanitas sanitatis, omnia sanitas, we see how the slogan can and should sound through the whole maze of medicine. As the student passes to his clinical studies it will become intensified, and, to change the metaphor, he will grasp the new guide-rope with a firmer grip, though still clinging on one side to his biological leading strings.

This address would double in length were I to consider all the ways in which the preventive idea may permeate general medicine, surgery, midwifery, gynæcology, pediatrics, diseases of the skin, and of the other special sense organs, mental diseases and even anæsthetics, for is there not a technique to prevent chloroform poisoning? Much of Sir George Newman's pregnant suggestion has yet to be worked out in detail. Its application will not be simple. It will call for patience and perseverance. I am very conscious of the fact that I have not been able to deal with it in the way it demands. Yet I hope that, at least, I have succeeded in showing in the first place how arduous, yet how engrossing, is the progress through the maze of medicine, and in the second place how, here in the University of Rochester, as elsewhere, it were well to reinforce the biological guide-rope in that maze by one leading step by step, yet ever more directly, to that conception of the prevention of disease which is becoming, if it has not already become, the lodestar of the physician, the hygienist, and the research worker alike. When once this doctrine is established, and not till then, it will be possible to assert that we are doing our best to preach and put into practice a belief founded on that wise saying of ancient Greece, where long ago certain basic principles were clearly recognised:—

"Without health life is not life, life is lifeless.'

An Address

[ABRIDGED]

ON A

HALF-CENTURY'S PROGRESS IN OPHTHALMOLOGY.

Being the Presidential Address delivered to the Section of Ophthalmology of the Royal Society of Medicine on Oct. 8th, 1926,

BY ERNEST CLARKE, C.V.O., F.R.C.S. ENG.,
CONSULTING SURGEON, CENTRAL LONDON OPHTHALMIC HOSPITAL.

[Mr. Ernest Clarke began with a warm testimonial to the learning and merits as a teacher of Mr. Waren Tay at Moorfields, and then passed in rapid review the influence on ophthalmic surgery produced by the introduction of antiseptics and of local anæsthetics, pointing out the danger of the latter which in allaying pain might mask the symptom most disturbing to the subject so that the cause of the trouble is not inquired into. He proceeded to speak on:—]

EYESTRAIN AND CYCLOPLEGIA.

Eyestrain had been recognised and was styled "asthenopia" and practically the only symptom allocated to it was headache. In 1892 I published a book on "Eyestrain," which was very well received and reviewed. I was inspired to write it by the work of Gould, of Philadelphia, and I shall ever be most grateful for undertaking this work as it entailed reading every published book on refraction, and Donder's "Classical Treatise" became my daily companion. Gradually eyestrain has been taking a more prominent place in ophthalmology and general medicine. We now know that there is probably no functional nerve trouble that may not be caused or partly caused by eyestrain; that it enters as a second or third partner in innumerable complaints, and that by preventing it we may indefinitely postpone epileptoid attacks, migraine, recurrent iritis, and possibly delay or postpone the appearance of glaucoma and cataract. We know that eyestrain is more likely to be present with small errors and that in sensitive patients 1/8 D. may make all the difference between happiness and content, or discomfort and unfitness. In certain individuals eyestrain may be one of the frictions of life, and a waste of nerve energy; just as friction is a waste in mechanics. . . . This wasting is very often small, but it is going on during all the waking hours when eyestrain is present and may be imperceptible—that is, no definite symptoms such as headache may indicate its presence, hence it is most insidious. This waste lowers the resisting power to disease both locally and generally, so that the individual exposed to some infection which he ought to be able to withstand succumbs because his fighting power has been lessened. As in these days preventive medicine holds a very high place, the possibility of the presence of eyestrain should always be borne in mind.

There are some who are preaching that cycloplegics are not necessary in estimating the refraction of the eye, but speaking to you with the experience of a life's work I would warn you not to listen to them. Most people under 40 years of age and some under 50 do not, and cannot, relax their accommodation completely so that you cannot get down to the "bed rock" of the real condition of the eye. Donders

preached the value of paralysing the accommodation, and 70 years has only served to strengthen his teaching. It is true that in many cases the atropine or homatropine examination reveals nothing new and the cycloplegic need not have been used, but in my experience these cases certainly do not amount to 25 per cent., and for the sake of the remaining 75 per cent. we must paralyse the accommodation in all young patients. It is, however, important to remember that unfortunately we have a dilated pupil during our examination, and therefore a post-cycloplegic examination is very often necessary before prescribing glasses.

In the discussion on a paper before the Ophthalmological Convention last year by Mr. Burdon Cooper,[1] a good deal was said about the abuse of cycloplegics, but Dr. Hawley, of Chicago, struck the right note when he said the object of the cycloplegic was not so much to find out the amount of hypermetropia or myopia, but the exact amount of the astigmatism, and there is no doubt that very small errors of astigmatism, that mean so much, cannot be fully revealed without a cycloplegic in patients up to 40 or 45. The ophthalmometer may reveal the presence of the defect, but in checking this with the subjective test, which should always be done, you can get no definite answer until the ciliary muscle is paralysed.

MYOPIA AND PRESBYOPIA.

In the treatment of myopia we certainly have advanced. In my young days it was customary to let myopes of, say, 3 or 4 D., do all their near work without glasses, and if the myopia was higher, for instance, 7 or 8 D., 2 or 3 D. was taken off for near work. Time has shown that the ideal treatment of myopia is to correct it fully with any astigmatism that is present, and force the ciliary muscle to do its proper work, and in this manner stay the progress. In the paper [2] I read before the Congress last year, I think I showed conclusively that Sir Arthur Keith was right—that myopia was due to a badly constructed sclerotic and that this was prenatal and inherited. I suggested that this faulty sclerotic might owe its origin to some defective influence of one or more of the endocrine glands. I pointed out that we might stay the tendency to lengthening of the eyeball or retard it by careful refraction, and by preventing undue convergence in the very early years of life.

Presbyopia used to be very inadequately treated—a plus glass generally the same in both eyes and no correction of astigmatism unless large in amount. Now we know that the presbyopic age is just the age when, if eyestrain is present, it does the most harm. The vital energy is less—recuperative powers are less, very often worries and troubles of life are more acutely felt. We must correct the distant vision if an error exists as well as the reading, and the best way of doing this is by making the patient wear bifocal glasses. The improvement in the optician's art has made the way much easier, for the invisible bifocals are a very great improvement on the old-fashioned so-called "Franklin glasses." The reason that many people dislike these bifocals is, I think, due to the lower or reading portion being often made too strong. I find from experience that at no time of life is an addition of more than 2·75 D. needed, and very often up to 65, 2 D. is sufficient to add to the top or distance correction. We must remember these bifocals are for constant use, and if the reading section is too strong objects slightly further removed from the eye, as food on the plate at meals, become blurred. Everything also depends on the correct centering of these glasses and also making sure that the division between the glass should not be higher than the margin of the lower lid.

For many years I have been recording the accommodation power of my patients, and these records now number over 6000. You may remember that I have found that the average accommodation power, age for age, is somewhat higher than Donders put it, that it is a very delicate index of the "physiological age" of the individual, that if a person looks older and is really older than his or her years, their accommodation power is lower than normal and vice versa; that toxæmia lowers it; and the removal of the toxic condition is followed by increased power.

[Here Mr. Clarke enumerated, as proofs of progress, the great changes which have taken place in the treatment of imbalance of the extra-ocular muscles, the additions to methods of diagnosis, and treatment due to X rays, radium emanations, ultra-violet light, and vaccine therapy, as well as to much bacteriological research. He proceeded:—]

RETINAL HÆMORRHAGE.

It is not so very long ago that hæmorrhages in the retina were all labelled *hæmorrhagic retinitis*. As high blood pressure was generally associated with their presence it was supposed to be the cause and bleeding was, in many cases, adopted as part of the treatment. Fortunately for the patient the effect of bleeding was very transitory.

We owe much of our new knowledge on the subject to Mr. Foster Moore. Dr. Dale and Prof. Krogh, of Copenhagen, have also supplied important material. We now know that high blood pressure in the brachial artery does not necessarily mean high blood pressure in the retinal artery; at all events, high blood pressure is as much a symptom as the hæmorrhage and they both indicate a toxic condition of the blood. Dale, in a recent paper, pointed out that Krogh has shown (and other physiologists have acknowledged the correctness of his investigation) that the capillaries have a contractile force of their own under nerve and hormonal control, and that with increased relaxation they become increasingly permeable to the constituents of the blood plasma until, when fully relaxed, they fail altogether to retain it, and the blood passes without hindrance into the surrounding tissue. If hæmorrhage (from its derivation) means a bursting of blood it is not the proper term to use for this condition; one dislikes hybrid words, but *hæmoflux* would be a more appropriate term. Such a hæmoflux would be a very different thing from a large subhyaloid hæmorrhage, or what Mr. Fisher has rightly suggested should be called a semilunar retinal hæmorrhage, from a ruptured blood-vessel. It has been said that a proper classification of retinal hæmorrhages is badly wanted. Foster Moore has recently suggested the following, which seems to me very adequate. He says the leakage of blood occurs: (1) From arterioles from lodgment of infected emboli. (2) From capillaries due to toxins or to the impairment of the nutrition of the endothelium as in anæmias. (3) From the venules from mechanical causes. If the toxins are removed the blood-vessels will be restored to the processes of filtration, diffusion, and osmosis. The blood patches will be gradually absorbed, and if the external limiting membrane has not been penetrated the retina will gradually resume its normal appearance. I recently had a case of a lady, aged 49, whose right fundus was covered all over by superficial blood patches. She was found by Dr. McCrea and Dr. Carnegie Dixon to be toxic from streptococcal and *B. coli* infection. She received a series of doses of autogenous vaccines and in a few months completely recovered with normal vision, and not the semblance of a scar is now visible in the retina. We must remember that the leakage of blood in the retina due to toxæmia may be non-bacterial in origin, as Mr. Fisher pointed out in a very valuable paper on Retinitis in Pregnancy read before this Section some ten years ago.[3]

[Mr. Clarke next noted the connexion of dental sepsis with eye troubles, which is now so widely recognised, as is the influence of congenital malformations and their accompanying pathological changes.]

GLAUCOMA.

In the treatment of glaucoma, to take the place of the sacrifice of a piece of iris, a filtration cicatrix has been substituted. De Wecker, who made the suggestion first, was followed by Lagrange, Elliot,

Herbert, Von Hippel, and many others. From Mr. Davenport's paper on 405 trephine operations at Moorfields for four years in the September number of the *British Journal of Ophthalmology*,[4] Elliot's trephine operation appears to be the most popular for simple chronic glaucoma, and I personally quite agree with this, while iridectomy, introduced by Von Graefe 70 years ago, still holds its own for congestive and acute glaucoma.

The pathology of glaucoma has been taught us in the past by such masters as Priestly Smith and Treacher Collins. Lately, Thomson Henderson has advanced a new theory; that the access of the aqueous to the canal of Schlemm is prevented by sclerosis of the ligamentum pectinatum, as a predisposing cause, coupled with an immediate exciting cause which is vascular. Colonel Herbert has advanced another new theory that chronic simple glaucoma arises mainly, if not entirely, from a defective inward pull upon the pectinate ligament. . . .

[He attributed modern improvements in the treatment of convergent strabismus largely to the enlightenment of parents who bring their children now at an earlier age so that a considerable proportion can be cured by glasses alone. He spoke warmly of the ophthalmic work produced by war conditions, and especially of the preventive labours of Sir William Lister and others in respect of trachoma "hitherto the scourge of armies," and continued :—]

THE CAREER OF THE OPHTHALMOLOGIST.

Another great advance that has taken place has been in the education of the intending oculist. In the early days the only eye work was surgical and when the various hospitals established eye departments one of the surgeons on the staff was selected as head of that department. Naturally, the younger men who aimed at specialising in eye work concentrated on surgery and took the Fellowship of the Royal College of Surgeons, the study for which occupied all their time to the exclusion of any deep knowledge of medicine; consequently the proportion of oculists without a special medical degree at this time was *4 to 1*. As the knowledge of ophthalmology increased it became apparent that medicine was as important or even more important than surgery, so that now almost all the younger oculists possess a medical degree and the proportion is reversed. A few years ago Mr. Rayner Batten read a paper [5] before this Section hinting that the time might come when some conscious of not being good at surgery would concentrate on the medical side and call themselves medical ophthalmologists with the prefix of "Dr." which (in London) is not considered to be our correct designation. One great advance in our education has been the recent establishment of diplomas in ophthalmology and the possibility of taking the F.R.C.S., and M.S., of London with ophthalmology. I would, personally speaking from my own experience, strongly urge those who have just qualified and have started serving their apprenticeship as clinical assistants at one of our eye hospitals, to spend at least a year in general practice if they can possibly manage it. The value of this experience is priceless. It will teach them first that the eye is a very intimate part of the body and not a solitary organ; it will teach them how to drop their hospital manners and how to deal with private patients; it will teach them what they are never taught, or certainly in my day were never taught, how to deal with their colleagues and to realise that what is called medical etiquette is nothing more than acting according to the principles of common politeness and doing to others as you would be done by.

Although we cannot point to any great changes in surgical instruments during this long period, our equipment has enormously improved. Whereas the reflecting ophthalmoscope requires a distinct education to enable it to be used efficiently, the electric ophthalmoscope has considerably lessened the difficulties and put into the hands of every medical man the means of viewing the fundus. At first this may prove a mixed blessing but eventually it must be for good. A very great advantage of this instrument is the possibility of examining a patient in any position. On account of being able to approach so near the eye with the instrument, we can get a more extensive view of the fundus through a smaller pupil and a darkened room is not a sine qua non. In association with the ophthalmoscope I must allude to the increased facility for recording pictures of the fundus which has been instituted by Messrs. Hamblin at the suggestion and under the supervision of Mr. Rayner Batten. Such recording will enable us to study different phases of a disease in the same subject at different times and also the same disease in different subjects, and under different treatment, and these collective records will be most valuable for educational purposes.

The latest Meyrowitz's model of the ophthalmometer originally given us by Javal and Schiotz is a great improvement on the old Kagenaar model, and I strongly urge its more extended use, for if used intelligently as a servant, and not as a master, it is a most valuable instrument, saving time in refraction work and giving an accuracy (especially in the estimation of small degrees) that no other method can rival.

Lastly, during the last few years, Dr. Gulstrand has introduced us to the slit lamp. This instrument is surely going to help us in thoroughly appreciating structures and changes in the anterior part of the eye as the ophthalmoscope has done in the posterior region. As it has taken years for us to become acquainted with the latter, so will it probably be years before the slit lamp has yielded us all the knowledge we hope to obtain from it.

[Mr. Clarke concluded by pointing to the recent labours of Mr. Leslie Paton, Sir John Parsons, and Dr. Gordon Holmes on the neurological side of ophthalmology; to the work of Dr. Duke-Elder on ocular circulation; to that of Mr. Fisher and Dr. de Schweinitz in connexion with the pituitary gland, and concluded :—]

We have a grand stimulus to help in this progress when we realise what our work is. Treacher Collins, in his Bowman lecture, Elliot Smith and Sir Arthur Keith have shown us that the development of the area in the brain associated with vision has proceeded pari passu with the development of our physical and spiritual state. We can manage without taste, smell, and even hearing, but with blindness we lose our independence, and in the whole of medicine no part, it seems to me, is so overwhelmingly important as ophthalmology. This consideration should make us always put in good work which at the day's end, or our life's end, will always leave a satisfactory feeling of "something attempted, something done."

References.—1. Artificial Cycloplegia, Trans. Ophthal. Soc., xlv., 386. 2. Genesis of Myopia, Ibid., p. 373. 3. Proceedings R.S.M., Sect. of Ophthal., 1915, viii., 127. 4. Brit. Jour. Ophthal., 1926, p. 480. 5. Proceedings R.S.M., Sect. of Ophthal., 1919, xiii., 11.

ROYAL MEDICAL BENEVOLENT FUND.—The following are some additional cases relieved at the last meeting:—

Widow, aged 73, of L.R.C.P. Edin. who practised in the south of England and died in 1920. Eldest son, aged 45, allowed his mother £20 a month, but this ceased on his death in January last. Second son not in a position to make regular allowance but helps to the best of his ability. No other income. Voted £36 in 12 monthly instalments.

Widow, aged 54, of M.R.C.S. who practised in Wales and died in 1924. Owing to ill-health quite unable to work. Lives rent free in a cottage and receives the rent 5*s*. a week of an adjacent one. No other means but receives poor relief. Voted £26 in 12 monthly instalments.

Widow, aged 55, of L.R.C.P. who practised in London and died early this year. Late husband was in receipt of an Epsom Pension, the Old Age Pension, and an annuity from the Fund, all of which ceased at his death. Applicant is now looking out for work to maintain herself. The Fund voted £17 since May, and £18 in 12 monthly instalments from Nov. 1st next.

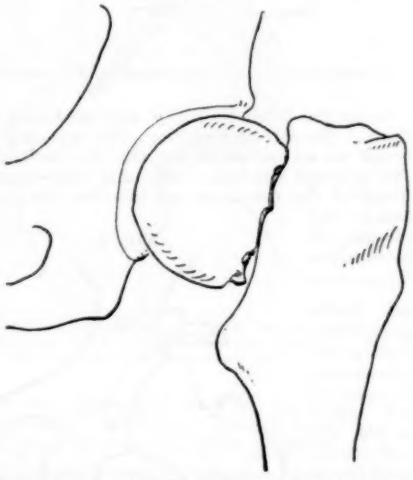
Subscriptions may be sent to the Honorary Treasurer, Sir Charters Symonds, K.B.E., at 11, Chandos-street, Cavendish-square, W. 1.

SOME CONTRIBUTIONS TO THE RECONSTRUCTIVE SURGERY OF THE HIP.*

BY ERNEST W. HEY GROVES, M.S. LOND., F.R.C.S. ENG.,
PROFESSOR OF SURGERY AT THE UNIVERSITY OF BRISTOL.

THE hip-joint, the largest and most important in the body, presents special difficulties and special displacements. It is more liable to serious disease and congenital dislocation than any other joint. Possibly this may be due in part to the evolutionary change from the quadruped to the biped gait and progression.

FIG. 1.

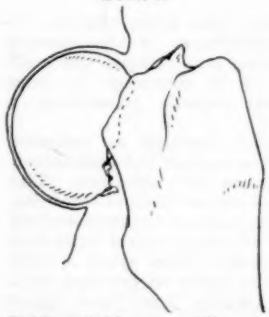


Outline of skiagram of fractured neck of the femur in a man, aged 35, before operation.

Fracture of the Neck of the Femur.

Fractures of the true neck of the femur—that is, of the bone proximal to the intertrochanteric line—present very special features. Unless impacted, these fractures never undergo natural union, and yet if artificial impaction is brought about bony union will occur just as certainly as in any fracture elsewhere. Non-union, which is the natural event in these cases, is due to four causes—namely, want of apposition, poor blood-supply, interposed capsule, and the action of the synovial fluid. Of these, the first two are by far the most important. If efficient treatment is delayed for more than a few weeks marked atrophy occurs in the proximal fragment, and after such an event, perfect restitution either of form or function is impossible. The three essential points in the treatment are: early intervention, accurate apposition, and firm fixation. If these points are observed, firm bony union can be secured in practically all cases whether in old or young.

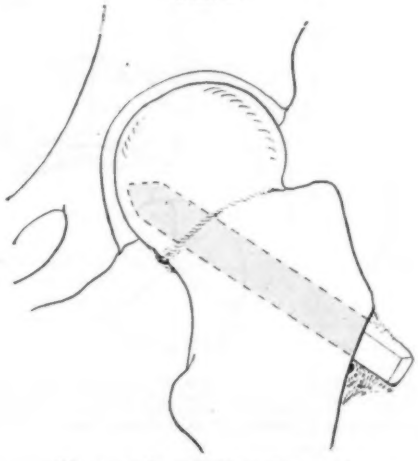
FIG. 3.



Outline of skiagram. Woman, aged 68, before operation.

The method advocated by Whitman is a great advance on previous methods of treatment. Under an anæsthetic the leg is pulled downwards, inverted, and abducted, thus impacting the fracture. The abducted limb is fixed in a plaster spica for three to six months. The objections to this method consist in its uncertainty and the very great torture and tedium of keeping an adult in a plaster case for several months. The uncertain result is due to the facts that manipulation of the leg cannot correct a misplaced proximal fragment, or get rid of that portion of the capsule which may lie between the broken surfaces.

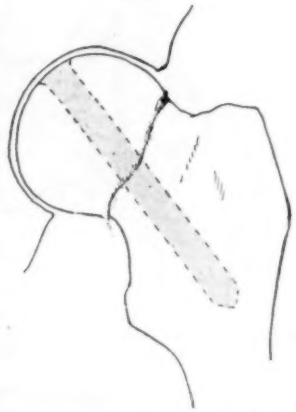
FIG. 2.



The same three months after pegging operation.

Fixing the fracture by means of a bone peg (Figs. 1 and 2) gives a much more certain and perfect union with less strain upon the patience and fortitude of the patient. The joint is exposed by an anterior incision, the capsule opened, the fractured surfaces laid bare, the fracture accurately replaced by manipulation, and a square peg 4½ in. long, ⅜ in. thick, driven from the base of the great trochanter through the neck into the head. The limb is put up in moderate flexion and abduction, steadied by slight traction. In six weeks' time the patient can walk with a caliper, and in three to six months can resume a normal life.

FIG. 4.



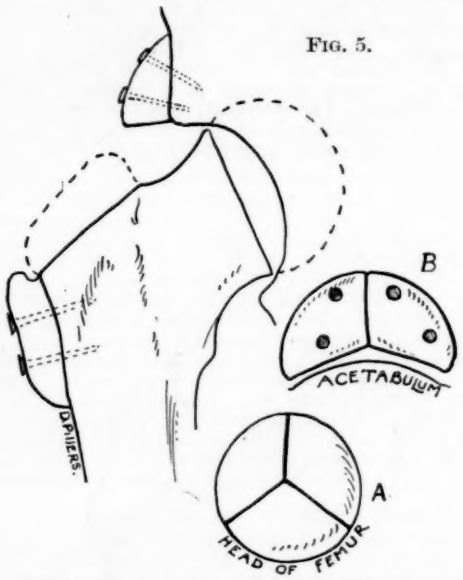
The same after operation. Note that in this case the peg has been driven in from above downwards.

Special modifications of the pegging operation are useful under certain circumstances. The peg may be inserted from above (Figs. 3 and 4). This is useful when the proximal fragment is very small and the line of fracture difficult to expose outside the hip socket. The head of the bone is dislocated and nailed on to the neck, after which the bone is replaced in position.

* Abstract of the Bradshaw lecture, delivered before the Royal College of Surgeons of England on Nov. 11th. The full text will appear in the January number of the British Journal of Surgery.

In old cases, where the fracture is of long standing, it may be useful to employ a living bone peg taken preferably from the fibula, because this type of peg will substitute some new bone in place of that lost by atrophy. The peg may be inserted blindly—that is, without exposing the joint at all. This method should be reserved for patients whose age or debility makes it desirable to avoid the more serious operation. The drill hole into the neck and the insertion of the leg should be made under the guidance of the X rays. Conditions of slipped epiphysis should also be treated by pegging operation, which is capable of restoring the bone to its perfect original form.

FIG. 5.



Reconstructive operation. The top of the trochanter is fixed lower on the shaft, the acetabulum has a new rim made from the old head. A = method of division of the head; B = method of fixing the shaped portions of head above the acetabulum.

FIG. 6.

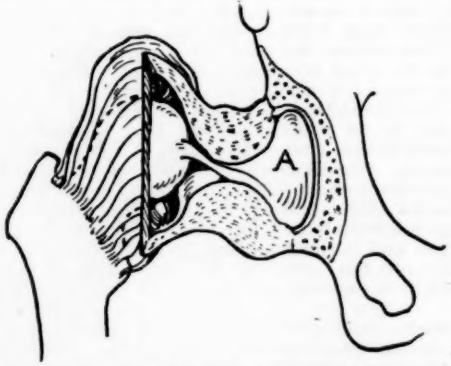
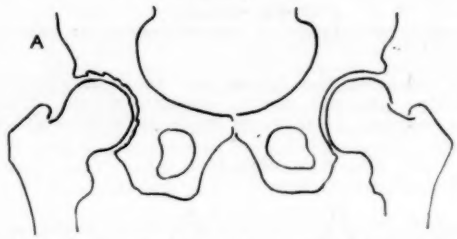


Diagram showing the thickened and constricted capsule as the main obstacle to reduction. A = acetabulum.

Ankylosis of the Hip.

There is no entirely satisfactory method of treating an ankylosed hip. It is comparatively easy to cure the patient of pain and to correct deformity, but it is extraordinarily difficult to secure mobility and stability at the same time, therefore, only those cases are operated upon in which double ankylosis of the hips or simultaneous ankylosis of the hip and knee make some treatment imperative. The more complicated methods of arthroplasty tend to leave the patient with a very stiff hip. It seems better, therefore, to be content with some modification of excision of the head of the femur. Two suggestions are made in order to secure both mobility and stability after this excision. To attain mobility, the capsular ligament is used as an envelope for the cut neck of the femur. To prevent the bone becoming dislocated the excised head of the femur is cut into two fragments and affixed to the upper margin of the acetabulum (Fig. 5).

FIG. 7.

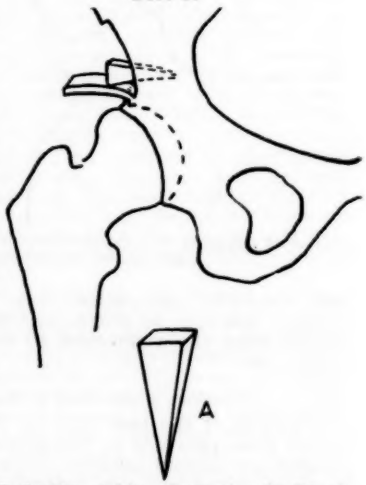


Reduction of congenital hip (A) by deepening the acetabulum.

Congenital Dislocation of the Hip.

It is now generally recognised that early cases of congenital dislocation of the hip can be efficiently treated and cured by manipulation. But it is not realised that in older children when manipulative reduction is impossible, a great deal can still be done by open operation to get firm and useful hip-joints. It is worse than useless to use elaborate and difficult methods of manipulative reduction in these older cases. The main obstacle to reduction is the tight constriction of the capsule (Fig. 6). No force or cunning can compel the head of the femur measuring 1 in. in diameter to pass through a thick constricted capsule presenting a channel of about ¼ in.

FIG. 8.

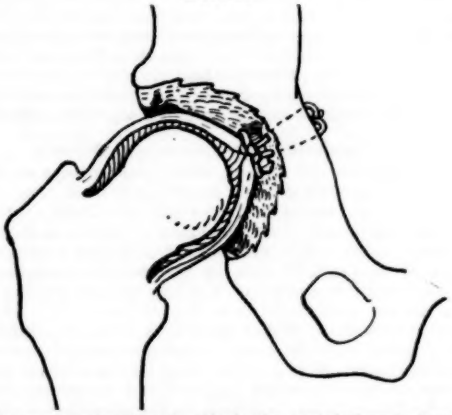


Reduction of hip. Increasing the lip of the acetabulum by a bone flap from the ilium. A = ivory peg for propping the flap.

Open exposure of the joint through an anterior incision makes it quite easy to reduce the dislocation after the constricted capsule has been slit open. The problem then arises as to the best methods of retaining the femur in its socket. In one method the acetabulum is deepened (Fig. 7), until it affords a socket sufficient to take the whole femoral head. This gives a very secure joint but one which is liable to become stiff. In another method, that which has been most frequently used, the cartilage of the acetabulum is left undisturbed and a new rim is added to the socket by turning down a part of the outer surface of the iliac bone (Fig. 8). In a third method the capsule is cut from its attachment to the pelvis and tied round the head of the femur, the acetabulum is gouged out, the head of the bone wrapped in the capsule is placed in the socket and anchored there by stitches which fix the capsule to the floor of the acetabulum (Fig. 9).

In the late or adult cases of congenital dislocation a great deal can be done to cure both the pain and the lameness by a subtrochanteric osteotomy, putting up the leg in full abduction. But this is only suitable for unilateral cases. When the dislocation is bilateral, the head of one femur can be brought down into the socket by removing about 2 in. of the shaft of the bone below the small trochanter. This will give

FIG. 9.



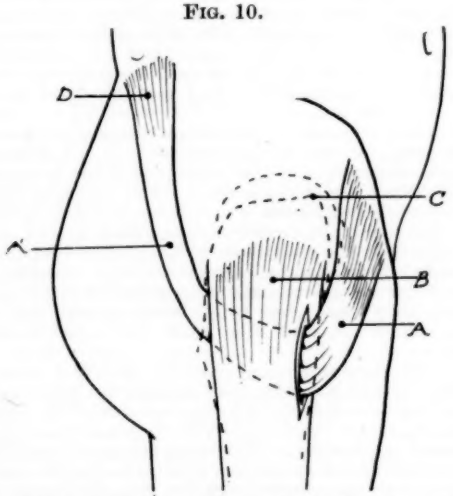
Third type of operation in which the acetabulum is deepened and the head enclosed in the capsule. The capsule is sutured to the floor of the socket.

a firm hip on one side and the two legs will be of the same length. At a later date, if necessary, an osteotomy may be done on the opposite side.

Infantile Paralysis Affecting the Hip Muscles.

Extensive infantile paralysis of the lower limb can to a large extent be made good by means of apparatus

FIG. 10.



New abductor muscle. A = tensor fasciæ femoris; A' = iliotibial band, brought through the trochanter and fixed to erector spinæ; B = outer surface of trochanter covered by origin of vastus externus; C = top of great trochanter; D = erector spinæ.

which fixes and controls the knee- and ankle-joints, but paralysis of the gluteal muscles leads to a complete inability to balance the trunk upon the leg and necessitates the permanent use of crutches. It has been suggested that the lost abductors may be replaced by using the tensor fasciæ femoris or the erector spinæ muscles. Neither of these muscles singly can make a very efficient abductor, partly because one lies in front and the other behind the required line of action, and in the case of the back muscle because of the difficulty in getting a necessary tendinous insertion. By combining these two muscles an efficient digastric abductor of the hip is formed. A long incision is made on the outer side of the thigh; the iliotibial band is isolated and cut above the knee; the fascial band forming the tendon of the tensor muscle is brought backwards through the base of the great trochanter; the erector spinæ muscle is exposed by a vertical incision and the lower portion isolated by cutting through its lower origin and splitting this part of the muscle upwards for about 4 in.; the iliotibial band is brought backwards and upwards through a tunnel under the skin and fixed to the isolated part of the erector spinæ muscle (Fig. 10).

THE MANAGEMENT OF INFECTIOUS DISEASES IN BOARDING-SCHOOLS.

Being a Presidential Address delivered before the Society of Medical Officers of Schools on Nov. 12th

BY A. I. SIMEY, M.D. CAMB., F.R.C.P. LOND.,
MEDICAL OFFICER TO RUGBY SCHOOL.

THIS address does not claim to be an exhaustive review of the rules dealing with infectious diseases in schools, a model for which exists in the Code of Rules published by this Association. Different schools, I am aware, differ somewhat in their regulations—for example, some regard the incubation period of mumps as extending to 28 days, whilst others put it down as 26, or even less—but I take it that the Code represents fairly well the principles on which our regulations are based, and my remarks will deal more or less with what you may see recommended there. My aim is merely to open the question and provoke discussion, for I believe that some of you have a desire to see the Code modified or amplified in various details in accordance with the trend of modern thought and requirements.

It will be helpful to approach the subject from two main aspects: (1) The means taken to prevent the introduction of infectious disease into boarding schools. (2) The disposal of patients suffering from infectious ailments at school and the best methods of preventing the spread of infection, when it has once manifested itself.

Quarantine and Disinfection.

It is occasionally urged against the authorities of boarding-schools that whilst they insist on strict rules as to notification and quarantine for boys exposed to infection at home, they do not do unto the parents as they insist that the parents shall do unto them, in two respects: (*a*) Sometimes they are not punctilious enough in notifying parents that their sons have been exposed to infection at school, or that such notification is not as helpful as it might be to enable them to make arrangements for quarantine at home. (*b*) Whereas the school authorities refuse to allow a boy to return to school within the quarantine period, they do not hesitate to send him home directly term ends, even though it is likely that he will develop the infection soon after his arrival home.

The answers to these two criticisms are: (*a*) That great care should be taken that the school authorities formally notify parents *as early as possible* before the dispersal of the school for holidays, giving as much information as may be reasonably expected to enable the parents to make suitable arrangements for quarantine. (*b*) That it is not reasonable to keep a boy back at the end of a term to prevent his illness occurring at home; for, if a boy *has* to be ill, home is the more appropriate place for him. I hardly think it necessary to go further and point out that it is essential that the school premises be empty during holidays for cleansing and ventilation after a term of epidemic illness.

Critics should also recognise that it is a much more serious matter to introduce infection into a big school of pupils living in common day and sleeping quarters than it is to introduce it into a private house where, in addition to ampler accommodation, the susceptible individuals are fewer and more easily isolated from one another.

If it is agreed, to begin with, that every precaution must be taken to keep infection out of our schools, then I do not think that the usually accepted rules of quarantine in cases of exposure to infection during the holidays can be made much less stringent; on the contrary, I think that even more stringent rules should be laid down about common catarrhal affections, and that, at present, a special certificate should be required to the effect that, after due inspection, there is no sign of certain skin affections such as tinea cruris, impetiginous spots, and boils. But I do not think that it is necessary to insist on the full quarantine period "dating from the day of disinfection," except in the cases of diphtheria and scarlet fever. Even in these diseases I doubt the efficacy of disinfection of clothes, except by steam, but it gives some people a sense of security. To my mind, it is the condition of the nasopharynx, and not the clothes, that matters; externally situated, the virus of most exanthems dies down soon after leaving the body of the host, and rarely recovers, unless reinstated under optimum conditions, such as seldom, or never, occur normally.

There is, however, one point on which I should like to see agreement—viz., that inasmuch as a second attack of the scheduled exanthems is very rare, a pupil who, during the holidays, has been exposed to a given infection, provided that he himself has at some time in his life suffered from a well-marked attack from this infection, should be allowed to return to school without any delay, and, except in the case of diphtheria and scarlet fever, without disinfection of his clothes.

I believe there is very little danger from the clothes of persons exposed to infection, and that infectious diseases are rarely spread by the clothes of contacts. How rarely do we see them transmitted by medical attendants. Exceptions to this rule are, perhaps, diphtheria, scarlet fever, and chicken-pox. To sterilise clothes, disinfection by steam is the most, if not the only, certainly efficacious means, and should be adopted in the case of the two former infections. Chicken-pox is so mild a disease, and may have so long an incubation period, and spreads so much less readily than most other infections, that, in my opinion, it should be removed from the list of scheduled infections in our boarding-school regulations. I would likewise remove rubella, were it not that there is sometimes considerable difficulty in its diagnosis from measles and scarlet fever, and that it is a most rapidly spreading infection.

Unfavourable Results of Prevention.

It is an unfortunate result of the present precautions taken to prevent the introduction of infectious disease into boarding-schools that a great number of boys pass through private schools without having contracted, say, for example, measles. In the public schools similar precautions keep the disease out for two, three, four, or more years until a very small proportion of the community is protected by a previous attack. Then, when finally infection creeps in, a really great and serious epidemic is started, each round of which is greater and more serious than the last, until a time comes when the rounds cannot be distinguished and, for want of sufficient accommodation, patients in early and later stages of illness have to be nursed together, the wards, perhaps, are so full that they cannot be cleared, ventilated, and cleaned, and complications arise, which turn an epidemic into a nightmare.

I sometimes wonder what would be the result of entirely abolishing our code of holiday quarantine precautions and allowing infection to enter schools more frequently, but in smaller outbreaks, spreading the incidence, so to speak, over a number of terms instead of crowding an unmanageable number of cases into a few terms at long intervals.

Personally, I believe it would make but little difference in public schools if we *did* abolish our precautions, so long as the preparatory schools continue to offer so impenetrable a barrier to the introduction of infectious diseases, and, no doubt, it is *their* best policy so to do; but regarding the interests of the scholars, it is better for them to have their infectious diseases apart from a large congregation of children of the same age—in other words, they had much better get their infectious ailments over at home. If they *must* have them at school, then they are better contracted before puberty than during puberty, and in the smaller community of a private school than in the much greater community of a public school.

Accommodation for Sickness at Schools.

This leads me on to ask what percentage of beds should be provided by boarding-schools, as this point is not discussed in our Code of Rules: (*a*) for surgical and non-infectious cases; (*b*) for infectious diseases. I am quite aware that it is not reasonable to expect accommodation in the school hospital for every case of illness in times of big epidemics, for this would mean providing beds for 40 per cent. of the school population, but I do think that a minimum percentage of beds should be recommended (something between 10 and 20 per cent.), and that a certain small number of these should be assigned to surgical and non-infectious cases, isolated, as far as possible, from those containing infectious cases, although, when an infectious epidemic has established itself in a school, there comes a time when almost every individual member of the community and every school premise has been exposed to the infection, which is ubiquitous.

This may seem to be somewhat of a digression, but in reality it is the link between the two main headings of my paper and an introduction to the consideration of the treatment and prevention of spread when once an infectious disease has manifested itself; for it is obvious that to attain this end, if indeed it is generally attainable, there must be a sufficient number of single-bedded rooms in which patients can be watched until such times as a case under suspicion is definitely diagnosed. It is equally obvious that there should be ample accommodation of a suitable kind for the sick; by that I mean good airy wards of a suitable size, with proper up-to-date lavatories, sick-rooms, and bathrooms. There should likewise be an adequate number of nurses, day and night, who must be capable of exerting a strict discipline as well as being skilled in their professional duties; for these, too, there should be a dayroom and bedrooms so situated that those on night duty may be undisturbed during their sleep. The wards must also be so arranged that when two or more separate infections occur simultaneously in a school they may be kept quite apart the one from the other, and also from the non-infectious wards.

As to the admission of visitors into the infected wards, I think that rules vary in different schools, but I find no instructions in our code on this knotty question. It is very difficult to suggest rules of universal application. So long as the number of cases of any infectious disease is small—i.e., in the case of the first patient affected and the second round—i.e., those infected by him—I think it wiser that no visitors should be admitted, although I believe that it is most improbable that they will carry infection on their clothes. Of course, boys should never be permitted to visit their friends whilst still infectious, but a housemaster or his representative, provided that he himself has suffered from the disease in question, should be allowed to pay a short visit once a day at such a time as is chosen as being most convenient by the matron of the sanatorium. It is important that her approval, or that of a nurse deputed by her, be asked before a visitor enters the ward. Whilst in the wards visitors should not sit

down, and should keep at a reasonable distance to avoid infection; their visits should be very brief.

Convalescence and Discharge.

Let us pass on now to approaching convalescence and the time of discharge.

I have already laid stress on the necessity for good bathing facilities. During convalescence each patient should be allowed one or two daily walks and at least one bath a day, special attention being given to the scalp. I believe that he may then be safely discharged, without further disinfection of his clothes or belongings (provided that books are not included in the latter class), except in the case of scarlet fever and diphtheria, when his clothes and bedding should be disinfected by steam and his other belongings (the weak point!) by antiseptics in aqueous or vaporised applications. The present regulations, according to which it is illegal for a patient convalescent after scarlet fever and diphtheria to walk out into the country, should be modified. The places or things that he is most likely to have infected are his dormitory, his various class-rooms, study, chapel, and other premises which he visited *whilst sickening for the disease*, and it is quite impossible to go round all the places he may have visited before his admission and disinfect them.

Fumigation by formalin vapour in such concentration as is usually adopted does little or nothing more than make a sanitary smell and make one feel a false sense of security. Fresh air, wind, and sunlight, when supplemented by the work of a good charwoman, are more efficacious, for soap is itself a good disinfectant.

And now comes the problem as to the day of discharge: our codes of rules err, I think, on the side of extreme caution. I feel that, as a rule, though by no means always, in mild uncomplicated cases a boy is safe to discharge when he is clinically fit to return to school. Thus, whereas in the case of scarlet fever a minimum of six weeks' isolation is usually demanded, there are not a few cases which are fit to discharge at the end of four weeks.; the difficulty is to say which are those cases. It is well known that a certain few continue to be infectious, for no apparent reason, long after the usually observed six weeks are over, and I believe myself that the residual infection remains latent in the nasopharynx and may flare up again after a long interval if the convalescent develop a cold.

This suggests a possible precaution in having scarlet fever patients inoculated with an autogenous vaccine taken from the nasopharynx when convalescence begins. Concerning diphtheria I think our present rules, however exasperating they may be, *must* be retained in school work, even though the Klebs-Löffler bacillus, if it persist, be shown not to be virulent. In the case of measles I think a patient is never fit to return to school within 14 days of the full development of the rash, and often not till later.

I have already remarked on the difficulty which sometimes exists in diagnosing the rash of rubella from that of measles and scarlet fever and of other non-infectious conditions. But, once definitely diagnosed, I think that it should not necessitate detention of a patient who is physically fit to return to his work. Patients suffering from chicken-pox are nearly always detained too long, if the usual rules are followed. Given plenty of open air, soap, and hot baths, I believe they are safe when they are clinically and æsthetically fit, care being taken not to overlook the presence of glands.

I see no reason to alter the code rules as regards mumps and whooping-cough, for both of which infections I have more respect than the laity show them, though the actual period of infectivity in whooping-cough is probably short and limited to the catarrhal stages.

Laundry.

There is another practical point which deserves your attention.

The washing, especially handkerchiefs and sheets, of a boy who is admitted to the school sanatorium suffering from infectious disease needs special care. After his admission, linen scraps or the cheapest cotton handkerchiefs should be freely supplied in place of his own, and promptly burnt when soiled; but what about his underclothes and handkerchiefs with which he enters the wards, for they are the most likely to harbour the virus of the disease at its most infective phase. I feel most strongly that these should either be taken with him and washed at a sanatorium laundry, or else should be sent to a special laundry belonging to or set apart from the school, where special arrangements can be taken to keep them apart from non-infected clothes, and on no account should they be sent to private laundries which work for the general public. Indeed, I think that one of the possible sources of infection in a school may be the general laundry, and vice versa, infected school linen may possibly extend infection to the outside community.

Conclusion.

I have purposely refrained from any allusion to small-pox or to the routine use of the Schick and Dick tests in the management of diphtheria and scarlet fever in schools, as I have no personal experience of them as yet, and perhaps it is a little early to pronounce upon their practical utility in schools. In neither case have I yet known any outbreak of such dimensions that one might speak of it as an "epidemic," and I think that scarlet fever is the least infectious of the exanthems in boarding-schools. This is probably due to the fact that a comparatively large percentage of the community is immune to this disease.

To summarise, I feel that we have yet a great deal to learn about infection, especially as to its introduction into a community and its passage from one individual to another, and that too much stress is laid upon direct and indirect contact and too little notice is taken of spray and exhalations from the mouth and nasopharynx.

We are disposed, I think, to trust too much to artificial methods of disinfection, especially by chemical means, and to attack infection too little in its initial stages and too much when it is dying out naturally.

SOME OBSERVATIONS ON SOCIAL CAPACITY.

APPLICATION OF THE PORTEUS MAZE TESTS TO 100 BORSTAL LADS.

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THE ultimate problem facing those responsible for the future of the Borstal lad as his time for discharge draws near is well summarised by two questions appearing on the report to be furnished by the Institution, which pertinently inquire, "What the inmate desires to do on discharge," and "What he ought to do." Effectually to reconcile aspiration with capacity is a task of no small magnitude, and great care must be taken lest mere orderly and passive compliance with routine lead to false estimation of the lad's actual capacity to stand on his own, when removed from the atmosphere and guiding hand of the Institution. For the real test, in Tredgold's words, is "the test of life," and "the criterion of deficiency is not an intellectual but a social one."

It is a somewhat curious fact that whereas it is generally readily accepted that the physical weakling—e.g., with tuberculous diathesis or heart disease—cannot reasonably be expected to thrive unless placed permanently under favourable hygienic conditions, it is less common to encounter recognition of the need for a *permanently* "selected" environment to ensure

the safety of those whose weakness is evidenced, not in the physical, but in the mental constitution, by poorly developed social consciousness and low capacity for social adaptation. It is as though the lay mind were capable of grasping that an individual could be born so deficient in *physical* robustness as to mitigate against proper functioning as a social unit, but for some reason finds it difficult to conceive any human being as permanently lacking in the *mental* qualities necessary for effective existence in a modern social state unless, indeed, palpably mentally defective or insane.

Now it would certainly be a sufficiently difficult task to attempt to place all the nation's physical weaklings under perfect environmental conditions, but the problem is infinitely harder when the "weakness" to be combated takes the form of incapacity for adaptation to current social sanctions evidenced by repeated delinquency. Take the physical weakling from slums and mean streets and give him a chance and results are comparatively certain, but the "social" weakling may be placed with great care in circumstances in which 99 other citizens are making good, and when the day comes that his employer leaves a ten-shilling note on the office table for all to see, he alone of the hundred will take it, and most probably, in reply to your questions, he really will not quite know why he has done it. Talk to him long enough and you will no doubt succeed in suggesting to yourself that he took the money because his father was a drunkard or his mother was cross-eyed; because he was the eldest, middle, or youngest, of three and was actuated by some sort of complex; or because he did, or did not, go to the pictures; and you may persuade yourself that you have made an analytical study of the case, with the result that after the lapse of time you will find yourself in a position to prove that anything from collecting bird's egg to wearing hobnail boots is "a cause of crime." And still, innumerable young people will go on collecting birds' eggs and wearing hobnail boots, perhaps, if they are very daring, even doing both these things at once; and they will never be seen in a police-court. For the truth is, as indicated by Burt, that the delinquent must be approached as a unique human being *with a peculiar constitution*. Because a faulty axle gives way, the chauffeur must not lay disproportionate stress on a few twists and turns and difficulties in the road. The primary fault is in the axle. "Every cause and every influence," says Burt, "no matter what its special form may be, is found to operate, and can only operate, through its inner psychological effects. Conduct, and misconduct, are always, in the last analysis, the outcome of mental life." Now, one cannot have "inner psychological effects" unless there is an inner psychological "something" to be affected. That "something" is the innate mental constitution of the individual.

> "Our days, our deeds, all we achieve or are,
> Lay folded in our infancy; the things
> Of good or ill we chose while yet unborn."—*Trowbridge.*

"Temptation." Mercier tells us, "is strictly relative to the person tempted. Temptation is relative to disposition, and that circumstance which is strong temptation to one is but weak temptation to another, and no temptation at all to a third." If, then, the individual's innate capacity for social adaptation is accepted as of paramount importance, it is reasonable to concede the claim of Porteus, "that so far as mental diagnosis is concerned, the value of any 'test' score lies in predicting how well a person will adapt himself to his social environment."

The fault of the "Binet" scale (and its modifications) seems, in this connexion, to be in the premium which they place upon a purely verbal morality. The young delinquent is accustomed to live by his wits, and the ethically beautiful response he may make to such an inquiry as "what would he do if he had broken something which belonged to somebody else?" may bear no relation to the course he would actually pursue did the circumstances indeed arise.

Burt remarks of the maze tests "it is perhaps in estimating social, as distinguished from educational efficiency, that they will be found most helpful." This is indeed their particular advantage. The very essence of the tests is to stress the value of prudence, forethought, and ability to profit from mistakes, which are fundamental to social adaptability, and accumulated evidence tends to show that they bear a relatively higher average correlation with social capacity and industrial ability. It was for this reason that it seemed of interest to apply them to young men about to take their place in the outside world again, after some two years under training in a specialised environment. Each one had been tested by "Terman" at the time of reception, but the maze tests were carried out under more favourable conditions, since, instead of being at the commencement of what must seem to the youthful mind a long period of incarceration in strange surroundings, the individuals had long since become familiarised with their environment and were rapidly approaching the longed-for liberty. The ages of the lads involved ranged approximately from 18 to 22 years, and the offences committed were mainly, though not wholly, of the "stealing" or "breaking and entering" type. The results, summarised into 13 age groups, appear as follows, viz.:—

Below 5 .. 1	9 to 9½ .. 9	14 to 14½ .. 6
5 to 5½ .. 1	10 to 10½ .. 16	15 to 15½ .. 5
6 to 6½ .. 2	10 to 11½ .. 17	16 .. 5
7 to 7½ .. 3	12 to 12½ .. 19	
8 to 8½ .. 4	13 to 13½ .. 12	

It will be observed that only 16 of the 100 reached the level of 14 and over, as compared with the experiences of Grierson and Rixon, who found an average mental level of 14 years in 200 prisoners tested by "Terman" at Brixton. In no case did any lad achieve a Porteus score higher than his "Terman" level, but in a number of cases the Porteus score was lower. Occasionally, the fall was striking, and at least one case is worth individual mention. The lad concerned reached the level of 16½ years "Terman," but at the mazes could rise no higher than 9. In the Institution he usually produced a favourable impression upon the inexperienced but was not trusted by the seasoned officers. A very short time after his release, his behaviour was again giving cause for anxiety, though he had avoided actual arrest.

It is far from the writer's intention to imply, thereby, that social salvation or damnation is infallibly indicated by the "Porteus" or any other tests, but, from close consideration of the everyday behaviour both at work and at play, of the lads tested, there does seem some ground for believing that in this particular relationship the maze tests have advantages over the verbal types of test. These latter ask the delinquent to state what would be his reaction to certain hypothetical social circumstances, and it is a little ironical that one of the questions put to the candidate is "why should we judge a person more by his actions than by his words?" for "the word of the delinquent," to quote Burt once more, "has always to be verified." The maze tests, on the contrary, necessitate that the individual should act in the face of a concrete situation, in such a manner as must reveal with some faithfulness the presence or absence of qualities essential to social success.

The glib talker may, by the "Binet" scale, produce quite a false impression of his social stamina, and in such cases the additional application of the Porteus tests may materially assist the examiner in coming to the conclusion that the most judicious admixture of sunshine and rain can never turn tares into wheat.

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Clinical and Laboratory Notes.

A CASE OF ATRESIA OF THE VAGINA.

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CASES of atresia of the vagina (as distinct from cases of so-called imperforate hymen) in association with full development of the internal genitalia are rare. Therefore the following appears worthy of record.

M. D., aged 18, complained that she had never menstruated, but had had attacks of abdominal pain for 14 months. The attacks lasted a fortnight and recur at monthly intervals. The pain is felt in the hypogastric and sacral regions, is so severe that it causes vomiting, but is relieved by hot applications and brandy. The attack in which the patient was seen had lasted two weeks.

On examination she proved to be a poorly developed girl for her age with six digits on the right hand and each foot. The secondary sex characteristics were well marked. There was a mass in the abdomen extending from the symphysis pubis to the umbilicus and the upper part of this felt like the body of the uterus. The external genitals were normal, but what was at first taken to be a vaginal orifice with a hymen proved to be a patulous urethral orifice situated in a more posterior position than normal. There was no vagina. Examination per rectum confirmed that there was no vagina, and showed that the lower pole of the mass, which was cystic, extended to within about three inches of the perineum.

It was considered wiser to attempt to reach the retained menstrual fluid from below, and after it had drained away determine exactly what parts of the sexual apparatus were present and then decide on a final course. Accordingly a transverse incision was made in the perineum below the urethral orifice, but anterior to the fourchette. Blunt dissection was cautiously carried out through moderately firm tissue, the direction being guided by keeping a sound in the urethra and a large dilator in the rectum. Finally the lower pole of the mass was reached and opened and menstrual fluid escaped. A tube was passed along the track formed by dissection and stitched to the vulva. The patient had been having rises of temperature before the operation and continued to have them after. A dilator was passed along the track daily and menstrual fluid escaped, with pus on one or two occasions. Five weeks later discharge from the track had ceased and there was still an abdominal swelling half way to the umbilicus but nothing suggestive of a uterine body, and the whole mass was fixed. During this time there had been no menstruation and no attack of pain.

On opening the abdomen the bowels and omentum were found adherent to the abdominal wall and to one another, evidently shutting off the retained blood which was found in the peritoneum. These were separated with considerable difficulty and during the process about an ounce of pus escaped from a pocket in the region of the right appendage. By further dissection the appendages were freed, the right from its normal position, the left from the bottom of the pouch of Douglas. The tubes were found to be distended with blood and the left open at its fimbrial end. The uterus was enlarged, soft, and retroverted and ended abruptly below in a firm boss, embedded in soft connective tissue. Hysterectomy was carried out, but in attempting to enucleate what was thought to be the lower pole of the cervix from its bed it was accidentally cut through, and as the patient was very shocked and all secreting tissue had been removed no time was lost in dissecting out the remaining plate. Peritonisation was carried out in the usual way but with some difficulty. The dissection from the perineum was found to have opened into the pouch of Douglas and this was kept open as a drain.

On examining the specimen the uterus and tubes were found to be distended with blood and there was a small cap of vagina about half an inch long attached to the uterus. The patient had a somewhat stormy convalescence. Fairly large quantities of pus were discharged from time to time from the perineal sinus, which was kept irrigated regularly, but there was never any suggestion of peritonitis. On examination four weeks after the abdominal operation the perineal track was found to be healed and, per rectum, there was a little thickening in the region of the stump of the right broad ligament. The patient is quite well and free from pain.

As there was definitely menstrual blood in the pelvic cavity in this case it is interesting, in view of Bailey's paper on Endometriomata [1] to speculate as to the future of this patient. Unfortunately none of this fluid was saved and examined for endometrial glands. A search of the literature has only revealed 14 cases of atresia of the vagina combined with hæmatometra, with or without hæmatosalpinges. The treatment in most cases has been abdominal operation. Where perineal drainage has been resorted to first the convalescence has been slow. Successful attempts to form an artificial vagina are recorded in five cases and the technique given by Pfannenstiel and Vineberg [2] appears to be the most hopeful.

PERFORATION OF GASTRIC ULCER DURING X RAY EXAMINATION.

BY F. W. LANG, B.SC., M.B., CH.B. EDIN.,

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THE perforation of a gastric ulcer during a barium meal examination by X rays must be a rare occurrence. It may, therefore, be of interest to narrate the facts of the undermentioned case, in which this untoward incident actually occurred.

Clinical History.—T. W., aged 65, attended the surgical out-patient department of the hospital for the first time on April 19th last. He complained of severe pain "in the pit of the stomach, just like something gnawing at me inside." It had started about two years previously and had been periodic in nature, sometimes leaving him for intervals of up to two months. The pain came on about two hours after food, and, at first, was relieved somewhat by more food. Latterly, however, food aggravated it to such an extent that, although his appetite was good, he was "frightened to eat." During the last three weeks it had become more severe and tended to be persistent. Nausea and retching were increasingly troublesome, and recently some relief was obtained if he "brought anything up," but very little actual vomiting had occurred. Regurgitation of "sour" fluid was, however, frequent. There was no history of hæmatemesis. His bowels were constipated. He had not noticed anything unusual about his motions. His previous health had always been good and his habits very moderate. Despite the increasing discomfort, he had maintained his strength sufficiently to continue at his occupation of boiler-maker till he reported at the hospital.

Examination.—General condition good. Though thin, he stated that he had not lost weight. Slight pyorrhœa alveolaris was present. On abdominal examination there was marked tenderness and hyperæsthesia of the skin just above the umbilicus. Otherwise nothing special to note. A provisional diagnosis of "gastric ulcer" was made. A barium meal X ray examination was arranged for April 21st—i.e., less than 48 hours afterwards. When he arrived on that date he complained that the pain was more severe. The barium meal was administered and a screen examination made. He was then transferred to the table for a plate to be taken. Immediately the pain became more severe and he could not lie still for long. On examination the typical signs of perforation were present—viz., collapse, extreme abdominal rigidity, loss of liver dullness, and rapid pulse. The plate was developed and appeared to show barium escaping from the lower end of the stomach.

The patient was operated on by Mr. A. E. Mortimer Woolf one hour later, and there was found a perforated ulcer in the anterior wall at the pyloric end of the stomach, corresponding to the site disclosed by the X ray plate. There was a quantity of barium under the liver, in the immediate vicinity of the ulcer. The perforation was closed with two layers of sutures and the free edge of the great omentum was stitched over the ulcer for greater security. It was not possible to remove all of the escaped barium. The wound was closed without drainage.

The patient made an excellent recovery and was discharged on May 31st entirely free from pain and from all other symptoms.

I wish to express my indebtedness to Mr. Mortimer Woolf for allowing me to publish this case.

[1] Bailey: Jour. Obstet. and Gyn., Brit. Emp., 1924, xxxi., 539.
[2] Vineberg: Amer. Jour. Obstet., 1906, liii., 511.

Medical Societies.

MEDICAL OFFICERS OF SCHOOLS ASSOCIATION.

A MEETING of this Association took place on Nov. 12th, Dr. L. R. LEMPRIERE, the President, occupying the chair.

The Management of Infectious Diseases in Boarding-schools: Discussion.

Dr. A. I. SIMEY initiated a discussion on the subject of suggested modifications of the rules usually observed in the management of infectious diseases in boarding-schools. His paper appears in full in another column.

Dr. DUNCAN FORBES (Brighton) expressed his general agreement with the opening paper. It was very rare, in his experience, for a third person infection to occur. In Brighton sanatorium there were cases of phthisis, tuberculous joints in young children, scarlet fever, diphtheria, and ordinary infectious diseases. The general nurses attended all these cases, but there had been no spread of scarlet fever or diphtheria to the children affected with tuberculous joints. It was well known that a third person, such as a nurse, might carry infection; when nursing a case of measles the disease might be carried to another child; but as a rule conveyance by a third person could almost be disregarded. In Brighton, since 1910, the disinfection of bedding had been given up, except in hotels and boarding-houses, the practice being continued in those houses when there had been cases of infectious diseases, so as to avoid the risk of an action for damages owing to neglect. Great reliance was placed on a thorough cleaning up with ordinary soap and water. In the case of tuberculosis antiseptic spraying was carried out. Since 1910 there had been no increase in the number of secondary cases in houses in the borough. No spread of infection had been traced to the clothing of scarlet fever and diphtheria patients being washed at the ordinary laundry. In some fever hospitals, however, the linen of scarlet fever cases was washed one day, and that of diphtheria cases on a separate day, but at Brighton no difference was observed, except that the linen left the laundry by a separate door from that by which it entered. He did not consider that in schools special laundries were required for the linen of patients suffering from infectious disease. He was surprised at the importance attached in the book of rules to drains as a danger factor in infectious disease, because the idea that ill-ventilated drains had a malevolent influence was now exploded. He thought much benefit would result in schools if the scholars could be taught simple decent habits of conduct, such as covering the mouth when coughing, refraining from putting into the mouth pens and pencils in common use, and their fingers also; as well as washing their hands before every meal.

Carriers of infectious diseases were often spoken of as healthy carriers, but the oftener such were carefully examined the more they would be found to have some lesion.

Dr. E. ELLIOTT, discussing the question of the conveyance of infection by the clothing, alluded to the importance of the pocket, the recipient of the infected pocket-handkerchiefs, both in a common cold and in any infectious nasal discharge. A clean handkerchief placed in the pocket would soon become contaminated. Was there any simple method of dealing with this?

Dr. E. H. T. NASH emphasised the fact that in the great public schools it was necessary to play for safety, seeing that one was dealing with such a large number of boys. The diphtheria and other carriers who were going about the country he regarded as dangerous. They should only be tolerated outside in places where they were not exposing the general public to infection. He said this though he was well aware that the actual projection of the diphtheria virus did not exceed the distance of three feet. Formalin disinfection, he considered, was efficacious, but it must be done in a moist atmosphere. He always had spraying done as well as fumigation. Having always in mind the need for a good margin of safety in these matters, because of the young and growing population being dealt with, he thought it was rather drastic to start revising the code of rules. He agreed with Dr. Forbes's views regarding drains, but thought the inhalation of foul air so debilitated the system that it became an easier prey to any infections there might be about. He was of opinion that at a future date Dr. Forbes's views would be prevalent in the country generally, but at present many responsible people lacked the courage to apply them practically. It would be well, he thought, to discuss this question jointly with the Society of Medical Officers of Health; then there might eventuate a revision of the book of rules, which was the Bible of the medical officers of schools.

Surg.-Captain P. M. MAY spoke as medical officer of a large school, though not a public one, the scholars of which were drawn from all parts of the kingdom. In that school practically every infectious disease was experienced, and there had been many epidemics. In one large epidemic there were 127 cases of scarlet fever and 107 cases of diphtheria. The Metropolitan Asylums Board were unable to take the scarlet fever cases, and the speaker had to treat them all. There were no fatalities. Diphtheria was so frequently occurring in that school that it was practically endemic. As soon as a case of it was recognised, all the boy's contacts were isolated for 14 days. Scarlet fever and measles, when once started, spread, one would suppose, very quickly, but that did not always happen. All the stipulated precautions, such as sending the clothes to the disinfector, were carried out as a safety course against criticism, though he did not agree with all of them. The record of the school in the matter of infectious disease was good, seeing that many of the boys lived in the crowded parts of Greenwich, where there was a good deal of zymotic disease.

Dr. J. YOUNG said an important question was as to whether more might not be done when the first case of an infectious disease in the school was detected. In measles one was fairly safe until the tenth day. In day-schools, if on the occurrence of the first instance of disease the school was closed for so many days, the children would develop the disease at home and there would be no school epidemic. In the case of boarding-schools, inthe winter-time the football scrimmage must be a potent source of infection.

The PRESIDENT reminded the meeting that the code of rules had been the school medical officer's court of appeal since 1884, and the advice of the medical officer was always being sought concerning disinfection. Hence in seeking to make any changes in the rules it was wise to proceed circumspectly. Still, the rules should be examined critically to see whether, in the light of up-to-date knowledge, they could safely be modified. Their whole object was to prevent the occurrence of infectious diseases, or, if they did occur, to limit their spread. So far the carrying out of the rules as laid down had been, he considered, a failure, and he was speaking with an experience of 3500 cases. In the past ten years there had been more epidemics of all exanthemata than in the preceding 20 years. The total number of cases during those two periods had been proportionately the same. And the percentage of cases among those who entered the school unprotected was about the same now as 40 years ago, except that the cases of rubella had risen 25 per cent. That was the disease concerning which most mistakes were made. Infectious diseases in schools were bound to occur, and attempts at the limitation of the incidence had not been successful, but rather harmful, as the larger the number of unprotected the bigger the epidemics and

the greater their severity. Therefore it was wise to realise how much time was wasted in long quarantine precautions. He agreed that one attack of these diseases conferred immunity against a second attack, and thought that most supposed cases of second attack were wrongly diagnosed. For example, a supposed second attack of measles was often found to be rubella. One could never know whether a case of mumps or one of varicella would produce an epidemic, and his inclination was to abolish quarantine for those two diseases. For a long time he had given up disinfection for scarlet fever and varicella. He agreed as to the importance of looking after the naso-pharynx as a precaution, and supported Dr. Simey's contention that the determining factor as to a boy's fitness to return to school was his clinical "wellness"; but a subject of measles should not be returned to school sooner than three weeks after that illness started. One public school treated rubella as if it were non-existent. The speaker thought that a varicella patient should be kept in for ten days, and when his face was clear school should be resumed. For mumps, three weeks should be allowed, because of the danger of orchitis. Certificates for return to school should either be rigidly enforced or discontinued. Catarrh was a curse of the schools; he included it in his certificates, and that had been a help. He agreed it was worth while to take special care and trouble over the first case of an infectious disease in school, though he had not been able to satisfy himself that it had done much good. He had great faith in the efficacy of a generous use of soap and water. The linen of boys suffering from infectious disease was soaked in disinfectant before being sent to the ordinary laundry, and he had not known of any cases of infection occurring among the laundry staff or their families. The incubation period for measles should be, he thought, 7 to 14 days, that for mumps 12 to 28 days, and for scarlet fever 1 to 12 days. For rubella 7 days from the appearance of the rash should be allowed if there was no persistence of nasal or other symptoms.

Dr. W. G. WILLOUGHBY (Eastbourne) said the code of rules had been of considerable use in giving the medical officer a guide. When he went to Eastbourne he found there were many private sanatoriums or institutions to which cases of illness were sent. He persuaded the headmasters and headmistresses in the borough that it would be better to allow the local authority to build blocks for the reception and treatment of cases from all over the town. It was done, the headmasters and headmistresses, through their association, paying 5 per cent. of the capital outlay. Though the present code of rules in regard to infectious diseases could not be shown to have had a very good effect, something of the kind was bound to exist. He acted in an advisory capacity in regard to infectious diseases concerning about 4000 children, and he had found that the great difficulty in the past had been the parents, because they were so keen on visiting the children in hospital. It was much better now. Recently a large experiment had been carried out in regard to quarantine, 6000 children being involved. In the old days, when a case of infectious disease occurred in a home, the other children were not allowed to attend school. Twelve years ago he removed that regulation, except in the case of infants, stipulating that the child could come to school if he or she had had the disease, whatever it was, previously. Since then the amount of infectious disease had been less than before. With regard to the practice of taking swabs in diphtheria cases, in one period no swabs were taken before patients were discharged, in a subsequent period two or three swabs of each case were taken, and only in the latter period had there been return cases of the disease. But that did not prove that the taking of swabs was not the right course; he believed it was. He quoted a case where small-pox was demonstrably traced to clothes infection; but he agreed that third person infection was very rare and unlikely. He also referred to infection conveyed by books. With regard to drains, he felt it was very important for the public health that drains should be all right; a slight sore-throat when feeling "run-down" could easily be precipitated by proximity to a bad drain.

Dr. W. ATTLEE thought a new set of rules would help to educate the public as to the importance of the disinfection of clothes, and of avoiding seeing their children because of the danger of conveying the infection to others. The idea of the school medical officer had been to play for safety, and in regard to heart disease this had been carried too far, the instructions precluding boys from participating in games and sport. The rules should certainly be made to embrace tinea and impetigo.

Dr. J. LAMBERT thought parents should be advised when their boys were ill, and every boy should be medically examined to ensure that he did not return home in an infectious state. It was found that isolation of a boy and his immediate contacts did not prevent an epidemic.

Dr. N. A. SPROTT would include in the rules regulations as to tonsillitis, influenza, and "pink-eye."

Dr. G. E. FRIEND said that 40 per cent. of the epidemics in his cognisance occurred at the beginning of the term, so that they were possibly started during holidays. He did not doubt that the epidemics occurring during term were caused by visitors. There was, at his school, a fairly numerous day staff, but he had not traced the introduction of infectious disease to them. He did not wish to see any alteration made in regard to certificates. Parotitis should be given a maximum period of 28 days. Boys with rubella were usually sent back to school at the end of a week if there was no discharge from nose or ears.

Anthropometric Graphs.

Dr. REGINALD HANSON exhibited cards for keeping records of the height and weight of children at various ages, both in actual figures and in graphs, such as he had been using for the children in the primary schools of the Duchy of Cornwall. He devised these in response to the wish of parents to keep records of the physical condition of their children from 5 to 18 years. A space in the card was occupied by hints on diet and health.

MANCHESTER MEDICAL SOCIETY

AT a meeting of this Society held on Nov. 3rd Dr. ALFRED A. MUMFORD, the President, took the chair, and Dr. J. F. WARD opened a discussion on

Spastic Paralysis in Children.

Spasticity, he said, was difficult to define, but signified an increase of muscle-tone and was an indication of an upper neuron lesion. The presence of such a lesion explained the loss of voluntary power in muscles supplied by nerves which were affected. Associated with spastic paralysis—in children more frequently than in adults—were athetosis, choreiform movement, and perverse movements. These were explained as due to unrestrained activity of extra-pyramidal tracts following a pyramidal lesion.

In children, said Dr. Ward, spastic paralysis was met with in the following conditions: (1) diplegias; (2) paraplegias of various origin; (3) hemiplegias; and (4) amaurotic family idiocy. The chief clinical manifestation of diplegia was spasticity of legs with adductor spasm; this often was not recognised until the child was several months old. Some mental defect was present in most cases, though very variable in degree. Sometimes, also, there was blindness, either cortical or due to optic atrophy, and convulsions might occur, though not as frequently as in hemiplegia; involuntary movements were also less common. A tendency towards improvement was noted in a large proportion of cases. There were two principal schools of thought regarding the ætiology, said Dr. Ward; the first school attributed the diplegia

to intracranial hæmorrhage or injury, whilst the second regarded it as a result of primary neuronic degeneration. Little had believed that asphyxia was the cause; causes suggested later were: meningeal hæmorrhage (McNutt, Gowers, and Osler); prematurity (Prissaud); and intra-uterine degeneration of neurons (Freud and, later, Collier). Sixty per cent. of the cases were associated with abnormal labour—difficult labour, precipitate labour, asphyxia, or prematurity. The work of Herbert Spencer, Eardley Holland, and others had shown the great frequency of intracranial hæmorrhage in stillborn infants and in those who died shortly after birth. Injury and asphyxia frequently occurred together in difficult deliveries. The hæmorrhage was chiefly intradural and most frequently diffuse, but might be only petechial. Many cases soon proved fatal, but those that recovered might not show evidence of involvement of pyramidal tracts for some months because these tracts developed later. Post-mortem evidence supported Collier's view, but Schwartz had shown that atrophic sclerosis might follow hæmorrhage. Syphilis was not an important cause; the Wassermann reaction was negative in most cases and other symptoms of congenital syphilis were absent.

Infantile hemiplegia, Dr. Ward continued, was probably of quite different pathology in most cases. The onset was generally later than that of diplegia, and was most common between the age of 6 months and 2 years. Convulsions and febrile disturbances were observed at beginning in most cases. These convulsions might be due to the same cause as the hemiplegia, but possibly the hemiplegia was due to a vascular lesion resulting from the congestion during the convulsion. There was frequently a history of infectious disease shortly before onset. Spasticity might be due to vascular lesions, to atrophy or sclerosis, or to porencephalus. Atrophy and sclerosis were probably sequels to encephalitis, and there was some evidence to suggest that this was a polio-encephalitis due to the same organism as poliomyelitis; the evidence, however, was not complete and "encephalitis" was rather a loose term. The treatment of spastic paralysis might be non-operative, by such means as massage and re-education, or else operative. Re-education was most important; massage might soothe hypertonic muscles, but its effect could only be very transitory. Electrical treatment was wholly undesirable. The operative treatment might consist of division of posterior nerve roots (Förster); operations on peripheral nerves (Stöffel); tenotomy; or sympathetic ramisectomy (Hunter and Royle).

Mr. E. S. BRENTNALL dealt with the principles of treatment and emphasised the importance, and in some cases the difficulty, of forming at the outset a fair estimate of the patient's educability. In very young children the treatment had to be left largely to the parents, and should consist of simple stretching of the tight structures and elementary postural training. The use of a foot-splint during sleep was essential, but prolonged immobilisation and splinting were undesirable. Activity and its educative results were of the greatest importance to these children. In older patients treatment should consist of physical training and should aim at developing the sense of balance and the coördination of the child. Both physical and mental improvement could be anticipated in patients who were educable. Operative treatment was directed almost entirely to the relief of contractures. It should only be undertaken in children with a fair degree of educability, and not before promising efforts to stand and walk could be made. Operative treatment in itself, said Mr. Brentnall, did not improve the sense of balance, and might, indeed, interfere with it if the child was long immobilised. The most useful methods adopted were the division, lengthening, and transplantation of tendons, and the Stöffel operation. Different methods would be found necessary in different parts of the limbs. In the lower limb operative treatment in suitable cases could be expected to produce distinct improvement in gait and activity. In severe spastic affections of the hand he doubted whether any tendon operation or nerve section was of real benefit or could restore any degree of functional capacity to the limb.

Prof. J. S. B. STOPFORD confined his remarks to the work done on the sympathetic innervation of striated muscle, reviewing the research of Hunter and Royle and others in this field. After submitting proof of the existence of the sympathetic supply of muscle he discussed the functional significance of the fibres reaching the muscles from the autonomic nervous system. Although, he said, the theory of muscle-tone propounded by Hunter and Royle had been severely criticised, their experimental results demanded further consideration and research; there was evidence that sympathetic denervation had an effect upon muscular activity and it was necessary to investigate fully what that effect was. It might be, as had been suggested, an indirect effect; the researches of Orbelli on the influence of the sympathetic upon fatigue were significant and might lead to a correct interpretation of the experimental findings. Several surgeons, said Prof. Stopford, who had described ramisectomy as of no practical value, had acknowledged some effect upon muscular activity in at least a proportion of their cases. Failure to obtain useful results by ramisectomy must not prevent the following-up of experimental research. For the immediate future it would be wiser probably to confine attention to a careful analysis of the effects of sympathetic denervation, and a review of the present position suggested that this might have far-reaching results.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting of this Institution on Oct. 28th, Mr. G. C. E. SIMPSON read a paper on

Obstruction of the Duodenum.

Besides ulcer, he said, there were other duodenal lesions which frequently caused indigestion. These included diverticula, involvement by growth or inflammation from neighbouring structures, tuberculous stricture, and obstruction by bands and adhesions from tuberculous lesions outside the duodenum. Cases of congenital malposition also occurred, and in one of these, he said, he had met an appendix which controlled the duodeno-jejunal flexure. After referring to Nagel's case of congenital diaphragm of the duodenum in a patient who survived to the age of 72, Mr. Simpson quoted a case of his own in which a man of 24 had had a stricture, two inches long, and half an inch in diameter, in place of a pylorus. In another patient there was a biliary cyst invaginating the wall of the duodenum from the biliary papilla to the superior mesenteric artery, where it caused obstruction; the cyst contained about 30 ounces of fluid with elements from bile and pancreas and a few stones, and a duodenal ulcer was also present. In these cases the symptoms of indigestion had been chronic but slight for years, and had then become more acute, with dilatation of the stomach. Flatulence had been troublesome.

Passing on to the subject of ileus, Mr. Simpson spoke of a case of chronic duodenal ileus in a girl of 12, which was treated by a belt, and referred to other early cases treated by colopexy. Gastro-enterostomy, he said, had been done in cases where the symptoms were particularly suggestive of ulcer, and where there was marked hyperchlorhydria; most of the patients had been males and the results were good. Of 14 patients treated by duodeno-jejunostomy half were cured or had only slight discomfort; two were done recently and three he considered definite failures. In view of the long-standing history and previous and associated operations, these results were satisfactory. All the cases showed enteroptosis.

Mr. Simpson then went on to consider bands from the gall-bladder and ducts to the duodenum and colon. Apart from adhesions definitely attributable to inflammation, such bands, he said, were common

and they were often the only lesion present where the symptoms were suggestive of duodenal ulcer or gall-stones; in such cases their release was beneficial. Proliferative changes in reaction to strain were responsible for such bands, though often the basis was of congenital origin. Here, again, there was usually enteroptosis.

Mr. Simpson described a case in which there was duodenal delay and prolapse in the obstruction, and appeared to be at the duodeno-jejunal flexure, probably from the duodeno-jejunal band. In general, he said in conclusion, obstruction of the duodenum tended to give a picture with periodicity. The pain was often relieved by food or by hot drinks. Both the intervals and the duration of the attacks were different from those of duodenal ulcer, the attacks being short, and flatulence was a constant feature.

Dr. T. W. WADSWORTH read a paper on the Clinical Significance of Cardiac Murmurs, in which he described the physical factors responsible for murmur production and the various theories about the presence of murmurs where no anatomical or pathological causes could be found. The term "accidental," he thought, should be employed when describing murmurs of this type; they could be qualified by such names as "hæmic" and "cardio-respiratory" when their ætiology was made clear.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on Nov. 3rd, Prof. WILLIAM RUSSELL, the President, in the chair.

Mr. HENRY WADE read a paper on

The Treatment of Tumours of the Urinary Bladder.

He stated that when blood appeared in the urine suddenly, unexpectedly, and painlessly in a person apparently healthy, it was probably due to a tumour of the bladder. Ninety per cent. of all such tumours developed papilliform ingrowths which bled when the bladder contracted, whether they were innocent villous papillomata, malignant papillomata, or primary papillary carcinomata. An exact diagnosis could only be made by cystoscopy or by removing part of the growth with a cystoscopic rongeur. The latter method was occasionally fallacious, as in the borderline case the part removed might be innocent, whereas at the base of the growth definite malignant changes might be present. The appearance on cystoscopy almost always made exact diagnosis possible.

The treatment of tumours of the bladder, said Mr. Wade, was determined by the nature, size, and extent of the growth. There was only one treatment indicated for a benign villous papilloma of moderate size—namely, fulguration. Fulguration of such a tumour should be painless. A local anæsthetic might be used, but, where necessary, it was better to give a narcotic, such as morphia, before examination. The treatment was devoid of risk to life, and could be carried out for the wage-earner without his losing an hour's work. It was especially useful in preventing the development of the secondary daughter tumours, frequently seen after cystotomy. In a few selected cases, a general anæsthetic might be given, especially where the mucous membrane in the neighbourhood of the tumour needed cauterisation. If the slough formed after fulguration was large and not voided, it might form the nucleus of a stone. Where the villous papilloma was of a very large size, it was unsuitable for removal by fulguration, and such cases should be treated by suprapubic cystotomy and removal of the growth. To minimise the risk of dispersing and implanting the cells of the tumour by the necessary handling of the growth, the bladder cavity and later the wound, were filled with a 1-1000 silver nitrate solution. After such an operation cystoscopy should be done at regular intervals for at least a year. If small daughter tumours were discovered, they should be destroyed by fulguration.

For primary carcinoma of the bladder, continued Mr. Wade, fulguration was not to be recommended; application of radium was said to give good results occasionally. The best treatment was to excise the entire growth, if possible. Those on the fundus of the bladder were most favourably situated for such excision, but when tumours were found in this position it was important to be sure that they were not due to invasion of the bladder by neoplasm of the intestine, ovary, or other organ. Where the base of the bladder was involved, partial cystectomy, with the removal of a portion of one ureter, might be done, the divided ureter being implanted into the bladder, or left in situ; the granulating cavity in which it was situated later formed a natural diverticulum of the bladder. Where a primary carcinoma was intrinsic, but could not be removed without excising the entire bladder, this very grave operation was warranted in view of the pain the patient would inevitably suffer without it, on account of recurring painful, spasmodic contractions of the bladder, which grew worse and worse. These contractions persisted after the ureters had been implanted into the loins or bowel, and therefore no palliative operation was possible. When total cystectomy was performed, it was most satisfactory to implant the ureters into the loins, the patient afterwards wearing an apparatus to collect the urine. In the male the prostate and seminal vesicles were preferably removed at the same time. The shock of the operation was not unduly severe. When an improved technique for bilateral implantation of the ureters into the bowel had been worked out, this method would probably be adopted instead. The results of the Coffey-Mayo technique in extrophy of the bladder suggested that it might be safely employed in bilateral transplantation.

A discussion followed, in which Sir DAVID WALLACE, Mr. J. W. DOWDEN, and Mr. J. J. M. SHAW took part.

Dr. STANLEY DAVIDSON read a paper entitled

An Investigation into Non-specific Therapy.

Non-specific therapy, he said, might be defined as the production of a therapeutic effect by the parenteral introduction into the body of some agent which had no biological relationship to that responsible for the infection. To-day there was still great diversity of opinion about its efficacy, and the process by which it produced its supposed beneficial results was still unsettled. It was believed that it might act in three separate ways: (1) by mobilising the defensive enzymes; (2) by producing a leucocytosis; or (3) by the universal stimulation of all body cells. This could only be produced by the intravenous injection of foreign protein in toxic doses. Protein shock must be produced if beneficial results were to be expected—i.e., a severe local and general reaction should follow injection of the protein. It could not be maintained, said Dr. Davidson, that non-specific therapy was in any way comparable to specific therapy as an efficient measure. It was weak in action, inconstant and variable in occurrence, and temporary in duration.

Prof. T. J. MACKIE discussed Dr. Davidson's results from a bacteriological point of view.

Dr. ALEXANDER GOODALL stated that in a small percentage of cases miraculous results were obtained by the use of non-specific agents, either protein or preparations of *B. typhosus*; more might be done to search for that part of the protein molecule which was therapeutically active.

Dr. JOHN EASON claimed that a large percentage of patients with rheumatoid arthritis showed marked improvement, which had encouraged him in the constant use of peptones.

The PRESIDENT had not found such benefits, and considered that peptone-shock was often a definite danger.

After other speakers had taken part in the discussion, Dr. DAVIDSON, replying, agreed that the clinical improvement noted in some cases should encourage further endeavour to ascertain wherein lay the benefits of non-specific therapy.

Reviews and Notices of Books.

THE FUNCTIONS OF THE BODY.

An Outline of Physiology. By V. H. MOTTRAM, M.A., late Fellow of Trinity College, Cambridge; Professor of Physiology in the University of London. London: Nisbet and Co., Ltd. 1926. Pp. 260. 7*s.* 6*d.*

Prof. Mottram points out in the preface to this volume that it arose partly as the result of a determination to give students of medicine at the beginning of their physiological course a bird's-eye view of the boundaries and important features of this science as a preliminary to a more detailed survey. His original conception, however, has been somewhat altered into an attempt to put the modern views of physiologists in a simple and untechnical form in which they could also be understood by a larger public. The volume is now intended, therefore, to serve as an introduction to physiology, not for the medical student only, but also for students of nursing, domestic science, teaching, and massage, and for that section of the general public which is eager to know something of the way in which the body works. The book is divided into eleven chapters, all of which are written with a gift of expression and wealth of example and analogy calculated to hold the reader's attention and interest without imposing upon him the exhausting concentration necessary for the digestion of large modern text-books. The study of function proceeds in an orderly sequence from that of the nervous system, sensory and effector apparatus, through that of food, its digestion, transport, oxidation, and excretion, to an account of the reproductive system in the lower and highest forms of life. One chapter is devoted to a study of the internal secretory organs; and the manner in which the secretions of these glands correlate the various activities of the animal and integrate them into an intelligible and purposeful whole is clearly described. A short summary is appended to each chapter, and references are given to the more advanced treatises pertinent to the subject under discussion.

The salient facts of physiological knowledge have been gathered together in a small compass and have been placed before the reader in an entertaining manner. The result is a volume as delightful as it is informative.

HANDBOOK OF DISEASES OF THE RECTUM.

By LOUIS J. HIRSCHMAN, M.D., F.A.C.S., Professor of Proctology, Detroit College of Medicine. London: Henry Kimpton. 1926. Pp. 403. 30*s.*

THIS volume begins with a practical account of the anatomy of the rectum, followed by details of methods of examination. Among those illustrated is the inverted or Hanes's position for sigmoidoscopy, which must be extremely unpleasant for the patient; the need for it does not seem clear when the knee-chest position is so satisfactory. The motto of this chapter, and in fact of the whole book, is that the slightest rectal symptoms necessitate a thorough examination if mistakes of omission are to be avoided. The technique of local anæsthesia is clearly described; the author prefers a ½ per cent. solution of novocaine, or ½ per cent. quinine-urea in cases where suturing is not required. Sacral anæsthesia, using 30–60 c.cm. of 2 per cent. novocaine is advised for the more extensive operations and has apparently given a high percentage of good results. Constipation and obstipation are discussed and the operation of rectal valvotomy for section of hypertrophied Houston's valves is stated to give satisfactory results in suitable cases. This operation is not generally accepted or practised in this country. In the section on pruritus ani the general failure of treatment by vaccines as advocated by Dwight Murray is admitted. The operation which is recommended of undercutting the perianal skin by two median incisions anterior and posterior to the anus does not impress us as being a good modification of Ball's operation; it would appear impossible in this modification to section the sensory nerves of the anal canal up to the level of the external sphincter, which procedure is the essence of the Ball's operation.

In dealing with the treatment of fissure and abscess certain points made by the author call for criticism. The deep, narrow "trench" which the author leaves after incising a fissure must cause the patient more post-operative pain and difficulty of dressing than the flat, shallow, lozenge-shaped wound. In regard to opening abscesses in the perianal region, the old advice to make a single straight incision, packing with gauze and subsequent daily separation of the skin edges, is here proffered. The wide excision of skin margins leaving a large circular or oval wound is a much better and more certain way, and far less painful to the patient. The chapter on fistula contains some good radiographs of fistulæ after injection of bismuth paste, but for the most part the photographs illustrating this subject are unsatisfactory, and would be better replaced by diagrams. Although the author admits good results with the injection treatment of internal piles, with not more than 25 per cent. of recurrences in from one to three years, he now prefers removal under local anæsthesia as being a more satisfactory and surgical procedure. The technique is described. A chapter on dysentery is contributed by Dr. John L. Jelks. The major operations, such as those for cancer of the rectum, are not described, the book being written solely to describe methods of diagnosis and treatment that can be carried out in the consulting-room. It is unlikely that in this country some of the operations illustrated, such as for prolapse and fistula, would ever be done except in a hospital or nursing home. Perhaps we are fortunate in that our patients are mostly willing to submit to a less ambulatory line of treatment.

This work is particularly valuable in showing the possibilities of local anæsthesia in proctology. In this country many cases of rectal disease operated upon under general would be better done under local anæsthesia. For instance, in operations for hæmorrhoids, post-anæsthetic vomiting may cause the formation of large œdematous tags at the anal margin. Details of the technique used are clearly set out. The book is a record of the views of an expert proctologist which will be read with profit by everyone interested in the subject.

CHRONIC DEAFNESS.

The Treatment of Chronic Deafness by the Electrophonoïde Method of Zünd-Burguet. By GEORGE C. CATHCART, M.A., M.D., Consulting Surgeon to the Throat Hospital, Golden-square. London: Humphrey Milford, Oxford University Press. 1926. Pp. 88. 4*s.* 6*d.*

Dr. Cathcart begins this little treatise with a good and spirited defence of empiricism, as distinguished from quackery, pointing out that it is possible to cure a disease of which we do not know the cause and that, conversely, to know the causation is not necessarily to know how to cure it. But he rather spoils his case by the overstatement that the members of the medical profession "are often afraid to try a new treatment lest their fellow members should hale them before the General Medical Council for quackery." This is wrong, and Dr. Cathcart should know that no medical practitioner could be so "haled" merely for trying a new treatment—indeed, a section of the Medical Act, 1858, expressly contradicts such an interpretation of the Council's duties.

The first part of the book is concerned with the prevention of deafness; the chief points insisted upon being the more frequent and more thorough removal of adenoids, and the more frequent incision of the drum in catarrhal, as distinguished from suppurative, otitis. The author is on firm ground here, but damages his position with such a sentence as this: "It is also true that adenoids sometimes

grow again, especially if the child gets any of the exanthemata or any diseases involving the naso-pharynx, such as diphtheria or mumps, as the high temperature accompanying these diseases makes the adenoid tissue hypertrophy." There follows a historical summary of the development of re-educative methods, especially that of Itard and the oral method of Urbantschitsch, and the Zünd-Burguet instrument is reached just half-way through the book; a small-scale illustration of the apparatus is included, but a diagram on a larger scale would have been a valuable aid in following the text. The instrument is actuated by electricity and is capable of producing, in their desired intensity, sounds extending over five octaves, passing through all the vibrations from 80 to 3500; these sounds are conveyed to the ears by ear-pieces, like those of a telephone, and it is the re-education by these sounds which forms the treatment. Both ears are treated separately, three to six minutes at a time, daily or twice daily; if no improvement results after 12 treatments the case is pronounced hopeless; if there is improvement the full course of 30 treatments is proceeded with. Improvement lasts, as a rule, from six to nine months, when another course is required. This is, of course, a drawback, but, if improvement be considerable, no deaf patient will grudge all the time and money he can spare.

The book adds little to the author's paper, published in THE LANCET last year [1]; he then gave his report of 100 cases treated, divided equally between cases of nerve-deafness, chronic otitis media, and otosclerosis; of 34 nerve-deafness patients 28 improved, of 33 otitis media patients 22 improved, and of 33 otosclerotics 18 improved. It is noticeable that nerve-deafness gave the best results, and it is difficult, in the absence of details, to realise of what kind of nerve-deafness the 34 cases consisted; Dr. Cathcart specifically says that he has not included any cases of neurasthenic deafness, or any cases caused by drugs (such as quinine or nicotine), or by syphilis, or due to war injuries, and we presume that he has excluded hysterical cases. Outside these categories nerve-deafness is not very common except among boilermakers and kindred trades. His list includes two girls of 9 and 12 years of age; further details of these cases would have been of interest. Dr. Cathcart further allows no tests to be of any value except the voice and the whisper. He tells a story of an otologist whose whisper varied greatly before and after treatment; we are sure that Dr. Cathcart's voice is under better control than this, but it is not an exact method, and we wish that results could be tested with greater mechanical accuracy; could it not be done satisfactorily with the audiometer, an instrument already described in our columns? (THE LANCET, 1925, i., 945).

We do not wish to be too critical of a comparatively untried method, though it involves a great expenditure of time on the part of aurist and patient; these are not insuperable drawbacks to any treatment, provided it can be proved to give adequate relief in a sufficient proportion of cases.

DAME LOUISA ALDRICH BLAKE.

By Lord RIDDELL. London: Hodder and Stoughton, Ltd. 1926. Pp. 91. 6s.

Lord Riddell in writing this short biography has aimed at revealing the subject's personality, at saying what she was as well as what she did, and at explaining how she was affected by her surroundings. The result is a sympathetic piece of work, and a small volume which Dame Louisa Aldrich Blake's friends and admirers will like to possess. The description of her parentage and early training prepares us with unusual aptness for the manner of woman that she became, and we can see how, almost inevitably, she turned to the profession of medicine as providing the best chances for the realisation of her ideals. An exceptionally successful career in the schools was followed by the tenure of a series of important posts at the Elizabeth Garrett Anderson and Royal Free Hospitals. In 1914 she was elected to the post with which her name is most closely associated, that of Dean of the London (Royal Free Hospital) School of Medicine for Women, and in that capacity she proved herself an admirable administrator, a great person at committees, and, to the considerable surprise of her colleagues, a financial adept who could make her theories of progress keep in line with the messages of bookkeeping and of balance-sheets. How the school prospered under her, how honours came to her, as well as the more intimate aspects of her character are well set out by Lord Riddell in a sketch which, as is explained in a prefatory note, has been deliberately made a short one, but is none the less vivid and complete within its limits.

ROENTGEN INTERPRETATION.

Third edition. By GEORGE W. HOLMES, M.D., and HOWARD E. RUGGLES, M.D. London: Henry Kimpton 1926. Pp. 326. 21s.

THIS excellent little book has now reached its third edition. The less useful illustrations have been replaced and a considerable number of new ones have been added, so that they now form a valuable adjunct to the text. Parts of the text have been revised and a general account of Graham's method of gall-bladder investigation has been included. In the chapter on chest work some account is also given of the use of lipiodol. A chapter on Fluoroscopic Technique and Protection has been added.

This is one of the best introductory text-books on radiology that we know; the authors have given a clear account of the various radiological methods employed and of the pitfalls that await the unwary, whilst surprisingly little has been omitted. The bibliography at the end of each chapter provides for those who require a more detailed account than it has been the author's intention to give.

JOURNALS.

THE PRESCRIBER for November is a special number devoted to rheumatic disease, with particular emphasis on their economic aspect. The prefatory part recognises that the term includes affections of a substantially different character, that tonsillar sepsis plays a prominent part in the ætiology of acute rheumatism, and that the treatment of chronic rheumatic diseases in general is entering on a more hopeful phase. The suggestion is approved that every large city ought to provide institutional treatment where rheumatic children can enjoy sunlight and fresh air with controlled rest over many months. Chronic rheumatism is regarded as having in part a climatic distribution, hence an effort should be made to compensate unfavourable climatic influences.—Dr. M. B. Ray describes the inflammatory connective tissue reaction characteristic of fibrositis, the nodules varying in size from a large pin's head to a pea, and he advocates early massage as a means of breaking up and dispersing these nodules and promoting free circulation of lymph. Fibrositis, he admits, is a veritable pitfall to the careless diagnostician.—Writing on osteo-arthritis, Dr. G. L. Kerr Pringle attaches importance to the observation that sterile synovial fluid removed from the knee-joint of an early case sets up degenerative changes when injected into the joints of an experimental animal, thus demonstrating the presence of toxic substances.—Mr. A. G. Timbrell Fisher, describing the surgical treatment of this disease, shows that treatment based on physiology and pathology holds out hope of preventing disability.—Dr. G. A. Allan estimates that there are 50,000 school-children already subject to organic heart disease, to whom salicylates may prove harmful by shortening the period of rest in bed; rheumatic carditis shows a predilection for children of the poorer classes who live in damp houses, and for them a residential hospital-school is the best after-treatment yet evolved.—Dr. J. L. Llewellyn discusses the relation between goitre and rheumatism, having found that acute rheumatism in the child of a goitrous mother

[1] THE LANCET, 1925, i., 968.

may be rebellious to salicylates but yield rapidly when thyroid is superadded. Iodine prophylaxis in goitrous regions will, he thinks, diminish also the incidence of acute and cardiac rheumatism.—Dr. A. G. Watson has found ultra-violet ray therapy of much benefit in rheumatic conditions, and Dr. J. B. Burt considers that natural mineral waters may have a specific action on certain forms of rheumatism. The symposium ends with a memorandum on spa treatment for insured patients.

TOBIAS SMOLLETT AND THE HUNTERS.[1]

IT is curious that a writer, as original, and, indeed, famous, as Tobias Smollett, should have been so much of a mystery to his own generation. He wrote little of himself, although in one place he denies that he has been personally through the blackguard scenes which he describes so brilliantly in his novels. He declares himself no friend to the Bohemianism about him. A man of family and, for his day, well equipped in education, he is neither a Pickle nor a Random, but much of a Jerry Melford—we trust that Humphry Clinker is still familiar reading. But he suggests Grub-street in his perpetual monetary difficulties, and his few discovered letters tell us little about his life save that he is for ever trying to raise loans.

The letters, some 74 in number, counting the description of a letter known to exist, have been admirably reproduced and annotated by Prof. Edward Noyes, of Yale University. Many of them are addressed to medical men—Dr. Macaulay, the husband of the lady historian, Dr. John Moore, and notably to the brothers William and John Hunter. The longest of the letters is, indeed, addressed to William Hunter, and one of the best shorter ones, reproduced in facsimile as a frontispiece in the present volume, is to the immortal John. The Hunters were his friends and patrons, and Jesse Foot, in the malicious way which he employed always in dealing with the Hunters, has suggested that Smollett wrote much of their work, not only in the *Critical Review* during the controversy with the three Monros, but at later dates. "I only attribute the keen conduct of the disputes on the part of the Hunters," says the pleasant Jesse in his "Life of John Hunter," "as they are to be found in the *Critical Review*, to the disinterested assistance of Smollett. I do not mean to be understood in saying that Smollett extended his services further," adding immediately "this episodical digression does not impair in the least the force of my general assertion, that John Hunter never was the author of any production which appeared under his name." The physician-novelist figures in a very clever sketch by Barber Beaumont, which is one of the satiric illustrations to Foot's own copy of the "Life" now in the Wellcome Historical Museum. He is shown writing to the dictation of John Hunter, who stands anxiously at the foot of a table while William sits by also apparently much interested. The likenesses are excellent and the cartoon is called "The Conspiracy."

Five very interesting letters to William Hunter, reproduced by Prof. Noyes, the originals being in the library of the Royal College of Surgeons of England, contain accounts of his travels in the south of France in search of health. He discovered Nice, the climate of which suited his constant cough, and has embodied the contents of this, the longest letter in the collection, in his "Travels," where it appears in a revised form. "On that part of the Rampart," he writes, "which faces the Mediterranean you enjoy summer all the year." He consulted Dr. Antoine Fizes, "the Boerhaave of Montpellier," who prescribed for him a kind of soup ("Bouillons of Land Tortoise"), opiates at night, and a course of goat's milk. He suffered from an obstinate ulcer, was very rheumatic, but was supposed by Fizes to be phthisical; but Smollett calls Fizes, though he enjoyed a high reputation as observer and therapeutist, "an old sordid scoundrel, and an old woman into the bargain." William Hunter was a generous benefactor to Smollett, and upon a letter of the latter containing a promise to repay a loan of £50, William writes: "In case of my death I desire my executors will not make any demand upon Dr. Smollett, because I sent the money to him as a present, never meaning to take it again." "It is pleasant," comments Prof. Noyes, "to record this passage of friendship, and to show that Scots may be generous as well as thrifty!" In August, 1763, Smollett writes to John Hunter from Boulogne, signing himself "with the most perfect Friendship and Esteem, Dear Doctor." The MS. of this interesting letter is, like many others, in America, and is the property of Prof. Tinker, who is an authority upon Smollett. The novelist refers to John Hunter's friendship with the Earl of Hertford and desires him to present "my most respectful compliments to him, and let him know that the books are restored." Lord Hertford was English Ambassador in Paris, and had been instrumental in getting Smollett's books, impounded at Boulogne, restored to him.

In another long letter Smollett says that this is the twentieth day that he has bathed in the sea, and later on refers to John Hunter as a book collector "glad to have every curious book on the face of the Earth. But I should be afraid of sending you some Books," he adds, "which you may have already." John Hunter's books were probably embodied in the sale of his effects in 1796, which his widow was driven to sanction in order to support herself; in the two sale catalogues of that year setting out Mrs. Hunter's curiosities and books, we find dictionaries of various languages, classics such as "Don Quixote" in an old edition, and learned works of all kinds, obviously of Hunter's collecting. It was John Hunter who suggested that the Library of the Corporation of Surgeons should be started, and he proposed sending books to it which have never been traced in the Library of the Royal College of Surgeons. There are some 500 items in one of the Ann Hunter catalogues of books now in the British Museum, and it seems quite incorrect to suppose, as has been done, that the volumes were negligible or nearly so.

In a grimly humorous short letter to John Hunter, dated from Leghorn in January, 1771, Smollett wills his body to the great surgeon. Subject to Mrs. Smollett's consent, he says, "you shall receive my poor carcase in a box, after I am dead, to be placed among your rarities. I am now so dry and emaciated, that I may pass for an Egyptian mummy, without any other preparation than some pitch and painted linen, unless you think I may deserve the denomination of a curiosity in my own character." The letter is cited by the late Thomas Seccombe in the "Dictionary of National Biography." Mr. Seccombe's remains the best-known life of the medical novelist. The letter is, perhaps, one of the first of those sent to the conservators of the Hunterian Museum from persons anxious, in the interests of science, to leave their bodies to the Museum. There are several of these missives among the papers left by Sir Richard Owen, but as the senders probably died where their wishes could not be attended to the bodies were to all appearances not delivered in Lincoln's Inn-fields. Prof. Jeffrey Bell, the comparative anatomist, actually left his body to the College in 1924, and the skull of this once familiar character now forms part of Hunter's collections. Smollett is buried at Leghorn, near which he died in September, 1771. Prof. Noyes is of opinion that his health had greatly improved at the last, for in a letter written a month before his death he talks lightly of undertaking an arduous journey and of wanting the "best part of a Barrel" of wine for a dinner party. This, however, may have been an instance of the false eupepsia of the phthisic.

V. G. P.

[1] The Letters of Tobias Smollett, M.D. Collected and edited by Edward S. Noyes, Ph.D., Assistant Professor of English in Yale University. Cambridge: Harvard University Press. 1926. $3.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 20, 1926.

THE MINERAL ELEMENTS IN NUTRITION.

In a recent Chadwick lecture Sir ROBERT GREIG reviewed the present state of scientific investigation into problems of animal nutrition. As chairman of the Board of Agriculture for Scotland, he is in close touch with the work which is being done at research centres there, and he evidently has also a wide knowledge of similar work in other countries. His lecture may come to many as a revelation both as regards the prevalence of deficiency diseases, in the sense of mineral deficiency as Sir ROBERT GREIG chiefly uses the term, and as regards the amount of information already accumulated of the causes of these diseases in animals and the means of preventing them. It appears that not only artificial diets used in modern intensive farm practice, but also natural pastures are often of a composition altogether unsuited to support the demands of growing animals, or the drain of lactation, on account of insufficiency of calcium, phosphorus, or some other inorganic element. Experiments at the Rowett Research Institute, summarised by Dr. J. B. ORR in a presidential address to a section of the British Association in 1925, show that the addition of lime to the food of pigs on a diet deficient in this element may double the gain in weight in a given time, and similar experiments by Sir ARNOLD THEILER in South Africa make it clear that the feeding of small amounts of bone meal to cattle grazing in an area where phosphorus is deficient in the pastures will treble the gain in weight. Elements other than calcium and phosphorus may also be deficient. Thus, young pigs seem liable to suffer from deficiency of iron, and deficiency of iodine appears to be accountable for several different pathological conditions in addition to goitre. In short, as regards farm animals, artificial dietaries are likely to be deficient in one or more inorganic elements, particularly calcium, and there are large areas of the Empire where the natural pastures are so deficient in certain inorganic elements that they cannot support in health the animals grazing on them. These data support THEILER in his view that, at least in respect of farm animals, mineral deficiencies are of much greater practical importance than vitamin deficiencies.

How does the matter stand with regard to human dietetics? It is a striking fact that we have no very definite idea of the amounts of calcium, phosphorus, iron, or iodine that are required by a growing child or a nursing mother, or of the amounts that are supplied by different human dietaries. Sir ROBERT GREIG points to the increased consumption of cheap carbohydrate foods and highly-refined foodstuffs. Dietaries including large proportions of these foods and little milk or vegetables should presumably be placed in the same category as artificial farm rations, for they are deficient in calcium and possibly other minerals. It seems probable that malnutrition in children may arise from this cause. In the poorer classes, whose children are most likely to be fed chiefly on such foods, both stunted growth and rickets are common. Without dogmatising on the relative parts played in the causation of rickets by hygienic conditions, lack of vitamins, lack of sunshine and lack of lime, it is fair to point out that a condition resembling rickets can be produced or avoided in farm animals by altering the proportion of minerals in the food, and that the Rowett Research Institute has shown the effect of sunshine in healing rickets to be bound up with its effect in increasing the absorption and utilisation of the calcium in the food. As Sir ROBERT GREIG says, milk is a perfect food. But many children are fed, not on human milk, but on cow's milk; and cow's milk, compared with human milk, contains more calcium, but less iron. Further, it is often supplemented from an early age with highly-refined cereal products containing little or no iron. Is it not possible that one of the causes of anæmic conditions in infants may be an actual shortage of iron in the food? The question of whether goitre is due to deficiency of iodine is by no means settled, but the results, as far as they go, on domestic animals and human beings, are in general agreement and seem to point to a possible iodine deficiency in certain areas. It is pretty certain that the danger of mineral deficiency in the diet is less in the case of human beings than in the case of farm animals, but there is undoubtedly much malnutrition suggestive of qualitative errors of diet. The resemblance between these conditions and the conditions arising in animals on diets deficient in mineral elements is sufficiently close to suggest that deficiency of minerals may be one of the factors involved. Such deficiencies would be more likely to assume importance under conditions of restricted diet. In war-time the food of an isolated besieged population is more restricted, and therefore more likely to be ill-balanced than normally, and war-time is always associated with ill-health and disease, in particular with malnutrition in children and nursing mothers. RUBNER calculated the inorganic content of the rationed food of the Germans in 1917–18. The daily intake of calcium, phosphorus, and iron was estimated in grammes at 0·226, 1·922 and 0·089 respectively, compared with 1·221, 4·472, and 0·154, the estimated pre-war intake. GREENWALD has suggested plausibly that this change in the inorganic content of the food may have had some influence on the causation of "war œdema." It is possible that in the study of human dietetics too little attention has been paid to the inorganic elements in the food, and that an investigation into this subject would give interesting results.

INCOME-TAX AND EXPENDITURE ON PROFESSIONAL TEXT-BOOKS.

EXPENDITURE upon his professional library is by no means a negligible item in the balance-sheet of the average member of a learned profession. Doctors can share the disappointment of lawyers at a solicitor's recent failure to persuade the income-tax authorities to permit deductions for the wear and tear of his law-books and for the cost of replacing obsolete volumes. There was solid ground for the solicitor's contention. Schedule D of the Income-Tax Act lets the trader make his reasonable deductions in respect of the diminished value of his machinery or plant by reason of wear and tear; it also allows him, in estimating his trading profits or gains, to deduct the expense of replacing obsolete plant or machinery. Last year's Finance Act declared that these concessions enjoyed by the trader should also be enjoyed by the professional man. The solicitor very reasonably argued that his law library was part of his machinery or plant for the purposes of his profession; further, some of it—presumably his text-books on

the law of property—had become obsolete during the past year owing to great changes in the law. The sum at stake was only £8, but the General Commissioners refused to allow the deduction, and they have now been upheld by the High Court. Mr. Justice ROWLATT said not one person in a hundred would claim that the books of reference on his shelves could be called plant or machinery. He agreed that the books used by professional men cost a lot of money, but he found himself obliged to dismiss the solicitor's appeal with costs.

What does "plant or machinery" mean in the case of a surgeon or physician? The motor-car for visiting patients, the surgical instruments and the surgery fittings, even the replacement of broken bottles—these are items for which the practitioner should claim to make annual deductions on the score of wear and tear, due regard being had to necessity rather than luxury, and to professional rather than private and personal use. No great number of legal decisions enlightens the interpretation of "plant or machinery" in this connexion, nor is the acute and experienced mind of Mr. Justice ROWLATT dependent upon decided cases in revenue matters. One of his own previous decisions, given in 1915, refused to allow Lord DERBY to deduct annual depreciation on the active lives of two stallions at stud in a racing stable. The life of a horse, said the learned judge, has a normal average length, like that of a tree, in the course of nature; ownership of it is an investment in a naturally wasting security; loss of usefulness due to old age is not wear and tear. In the face of this decision it seems hard if a costermonger cannot deduct for wear and tear to his donkey, or a carrier in respect of his horse, since a ferryman could presumably make deductions in respect of his boat. In extending the concession for wear and tear to professional men, Parliament must have realised that their "plant" would intrinsically differ from that of a butcher, baker, or candlestick-maker. Learned professions need the equipment of learning. The wear and tear of a book is as obvious as that of a boiler-house. Traders are presumably allowed deductions for machinery rendered obsolete by new inventions or by the accessibility of fresh sources of power. Why should not a professional man's professional library be "plant or machinery" for which income-tax deductions can be made when existing treatises are rendered obsolete by the passing of fresh laws or the publication of fresh scientific discoveries? Not long ago it was held that a medical practitioner holding various official appointments was not allowed[1] to deduct for income-tax purposes the cost of annual subscriptions to professional societies, though the expenditure was reasonably necessary for the efficient discharge of his duties.

So stands the law, and now no deductions will be possible in respect of the professional man's library unless the Income-Tax Act is amended.

POLIOMYELITIS IN SCHOOLS.

ACUTE poliomyelitis may occasionally be transmitted by flies or dust, but it is generally agreed that the infection is spread mainly through carriers, and the time is appropriate to summarise the excellent short chapter on this subject in Dr. K. C. PAUL'S little book on "The Carrier Problem."[2] Every case, this section of the book suggests, of poliomyelitis is regarded as developing from one or other type of carrier—contact or convalescent. Contact carriers are responsible for epidemic spread or for conveyance of infection to distant places; in them the carrier state usually does not last longer than three weeks; some of them are incubating and later develop symptoms. Convalescent carriers are generally persons who have had an unrecognised abortive attack, and in them the carrier state may be chronic. A group of 110 cases of acute poliomyelitis in an American community were all infected by a carrier from an infected household in a distant locality. S. FLEXNER was however unable to demonstrate by animal inoculation the long survival of the virus and believes that enduring carriers are of exceptional occurrence. Certain American observers found the virus still viable in the dust of the sick-room in which patients suffering from the disease had been confined; most regard the virus as living in the nasopharynx and occasionally in the tonsil. Numerically the susceptibility of the members of a community is small; C. HERMANN estimates it at less than 2 per cent., and attributes the defence against infection to local protective action, natural or acquired, on the part of the mucosa and its secretions. Certainly, a substance capable of neutralising the virus has been found in the washings from healthy nasopharyngeal mucosa, and carriers may owe their contamination to the absence of this neutralising substance. The method of transference—whether by direct contact, droplets of infected mucus, or virus-laden dust—is still problematical, for the virus eludes microscopic identification and its recognition requires inoculation into monkeys. In America management of the carrier has been limited to quarantine; the Flexner school regards the application of antiseptics to the nasal mucosa as of doubtful value, and it is not impossible that they may affect unfavourably the destructive properties of the nasal mucosa and to that extent be even objectionable.

One attack of acute poliomyelitis protects against a second, and, as we have recently pointed out,[3] there is reason to suppose that the general immunity of adults and older children in this country has been acquired by exposure to mild infection. In a community where this infection is easily picked up it is probable that most of the children will have met and fought the virus before they are more than 4 or 5 years old, and the disease is therefore unlikely to be dangerous in schools except when it has been uncommon amongst the general population for a long period. These assumptions may explain why school epidemics have been so rare in this country, and their rarity in turn explains why during the last few weeks different authorities have taken opposite views of the problems they present. About the middle of October a number of cases of acute poliomyelitis were reported in Broadstairs and the neighbourhood, many of them in boarding-schools and day-schools. The urgent question arose: Should the children be sent home? On the advice of Lord DAWSON and Dr. JAMES COLLIER it was decided that they should not. Dr. E. G. MOON, of Broadstairs, appealed to a group of schools affected to fall in with a policy of strict isolation, and each of them did its best to cut itself off from the town. The pupils were daily inspected and those who showed the slightest illness were at once removed; general meetings—as for chapel—were made as short as possible; the children were kept a good deal in the open air and they were made to gargle their throats three times a day with weak antiseptic. Informing circulars which we reproduce on page 1085, were sent to the parents, nearly all of whom allowed their children to remain at school, although, of course, they were not asked to agree to this course against their own judgment. The result, in this instance, goes far to justify the bold action taken; during more than a fortnight no fresh case of poliomyelitis has arisen. But it does not in itself show that the totally different action taken last week by the authorities at Uppingham School was an error of judgment. At each place a heavy responsibility was incurred in order to gain certain advantages. At Broadstairs it was claimed that the benefit of supervision and a healthy life outweighed the risk which any particular child ran by remaining at school; but it must be admitted that this was none too certain, and some of the cases which developed after the order to stay was given must be placed on the debit side in casting the accounts of the policy. On the credit side the present generation of Broadstairs

[1] THE LANCET, 1925, i., 60.
[2] Oxford Medical Publications. 1926. Pp. 102. 5s.
[3] THE LANCET, Nov. 6th, p. 964.

scholars is now reasonably immune from poliomyelitis, and the schools have solved their own problems without endangering the rest of the community. Dr. PAUL, whose views we summarise above, is reasonable in his assertion that any person who has been in contact with an active case of poliomyelitis must be regarded as a carrier, and the only management of a carrier at present is to place him in quarantine for at least three weeks. The responsibility which Uppingham School has taken is to send 500 potential carriers to their homes—where it is to be hoped that they will have been placed under adequate control as a letter to the parents from the headmaster would suggest. In an interesting paper which we publish this week (see p. 1057) Dr. A. I. SIMEY, of Rugby, defends the practice of sending boys home at the end of term, even although they may be in quarantine. "If a boy *has* to be ill," he says, "home is the more appropriate place for him." This view will have its critics. No one would suggest that more than a very few of the Uppingham boys are really carriers, although the two cases occurred in separate houses; but at the same time, from the point of view of public health, the situation cannot now be controlled as it could have been controlled even in the scattered units of the school. At least one of the pupils taken away from Broadstairs has already infected another child in another part of England, and it may happen that carriers from Uppingham—if any—will do the same; which possibility has to be set against the natural satisfaction which the boys' parents must feel at having their sons removed from an immediate danger. Many medical men would undoubtedly take their children away from school in similar circumstances; but undoubtedly the child thus removed should, properly speaking, be isolated as a possible carrier. The frank account of the two cases at Uppingham, furnished by Dr. WILLIAM DUNN, the school medical officer, shows the fulminating nature of the first case and the successful treatment of the second, while pointing out that at Uppingham the isolation policy would have been attended with scant chances of efficacy.

Some of the disadvantages of protecting young school-boys against infectious diseases are spoken of in Dr. SIMEY's address. They are apt to contract their measles and mumps at a more inconvenient time. We have referred above to the view that immunity in poliomyelitis is chiefly acquired, and, if this is true it furnishes, perhaps, an argument that carriers should roam as they will. It does not, however, furnish a convincing case in favour of allowing the disease to work out its own salvation in a confined community—e.g., a school—because it is possible that an infection becomes more virulent in its passage through such communities. When Uppingham reassembles, as has been pointed out, the risk of infection will still remain, and an efficient means of protection would obviously be useful. In this connexion some apposite results have recently been communicated to the Swedish Medical Society by Dr. H. DAVIDE, whose earlier work on the bacteriology of this disease was already well known. During 1924 there was a series of outbreaks in a Swedish district, where the scattered and comparatively stationary character of the population offered exceptionally good facilities for studying the epidemiology of the disease. Dr. DAVIDE spent a considerable time in making personal, house-to-house investigations, and was able in many cases not only to trace in chronological order the spread of the disease from one person or family unit to another, but also to show that the proportion of slight or abortive forms was very considerable. Having mapped out the areas that were likely soon to be involved in the epidemic, Dr. DAVIDE proceeded to immunise a certain proportion of the juvenile population with the serum of patients convalescent from a typical attack of acute anterior poliomyelitis. The principle followed was that put into practice in the case of measles by NICOLLE and CONSEIL. The serum was taken from the convalescents not less than ten days after they had become afebrile, and the usual steps were taken to ascertain that the serum was sterile and Wassermann negative. Five c.cm. of the serum, to which 0·5 per cent. of carbolic acid had been added, were injected into the muscles in the gluteal region. Only persons under the age of 25 were selected for this experiment, and half the number of the persons under this age were not treated, so that they might serve as controls. Dr. DAVIDE must have experienced difficulty in finding controls, and he admitted that while it was easy to interest parents in the inoculation of their children, it was much harder to explain why only every other child was to be treated—such are the conflicts between science, as defined by the seeker after knowledge, and humanity, as defined by the parent. Dr. DAVIDE succeeded, nevertheless, in studying 157 persons under the age of 25 in a threatened district. Of these he inoculated 73 and left 84 to serve as controls. Of these 84 as many as 14 subsequently developed abortive or typical acute anterior poliomyelitis, whereas among the 73 who were inoculated only one fell ill. This was a boy, 4 years old, who developed definite cervical rigidity within 40 hours of the injection. The child was probably febrile, but the temperature was not taken. The malaise lasted only half a day, and it seems likely that the child was caught in the incubation period and that the inoculation made the disease run a mild course. Among the 14 controls who developed the disease, the majority showed only the abortive forms, but there were several cases in which definite paralyses developed. As Dr. DAVIDE pointed out, his material is too small to justify final conclusions; but it certainly warrants further investigations on the same lines. The immunity conferred in the manner indicated may not last more than a few months, but in the meantime an epidemic may have blown over, and the dangerous time of the year, August and September, during which most paralyses and deaths occur, may have been safely tided over. The supply of suitable serum is, of course, bound to be limited, but the chances of its doing any harm are very small. For, as Dr. DAVIDE insisted, serum taken from a convalescent at least 10 days after he has become afebrile, is not at all likely to contain the virus of acute anterior poliomyelitis, which has not hitherto been conveyed from one experimental animal to an another by blood infection.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION.—On Thursday, Nov. 25th, at 5 P.M., Mr. Harold Chapple will lecture at the Medical Society, 11, Chandos-street, Cavendish-square, London, W. 1, on the Emergencies of Pregnancy and Parturition. On Tuesday, Nov. 23rd, at 11 A.M., Mr. B. Leggett will give a lecture-demonstration, at St. Mark's Hospital, on Radiological Investigation of the Colon and Rectum. Both these lectures will be free to members of the medical profession. A week's comprehensive course will be given at St. Mark's Hospital, from Nov. 22nd, instruction being by operation, demonstration, and lecture. A late afternoon course (5 P.M.), from Nov. 22nd to Dec. 18th, will be held at the West End Hospital for Nervous Diseases, 73, Welbeck-street, London, including lectures and demonstrations upon selected cases; the fee is one guinea. For the convenience of general practitioners the London Temperance Hospital will hold a course in medicine, surgery, and the specialties from Nov. 29th to Dec. 11th (4.30 to 6 P.M.). Courses in obstetrics can now be arranged for at the Queen Charlotte's Hospital and the City of London Maternity Hospital. The Fellowship has concluded arrangements with the Samaritan Hospital for Women to provide clinical assistants; personal application should be made to the Fellowship. Practical courses in anæsthetics can also be provided. Copies of all syllabuses, of the General Course Programme, and of the *Post-Graduate Medical Journal* may be had from the Secretary of the Fellowship at 1, Wimpole-street, London, W. 1.

Annotations.

"Ne quid nimis."

THE ADJUSTMENT OF ARTIFICIAL LIMBS.

THE circumstances attending the fitting of a patient with an artificial limb have been discussed on more than one occasion, accompanied with the suggestion that regular coöperation between the surgeon and the instrument-maker to obtain the best results from their joint work is not sufficiently insisted upon. A case in point has been brought before us this week. The patient had the leg amputated below the knee for a chronic tuberculous condition, when the instrument-maker found that, owing to the conformation of the stump, great difficulty was experienced in fitting an artificial limb, and in the end the particular prosthetic appliance was heavy, while as it happened the firm in question, Desoutter Bros., have introduced artificial limbs of unusual lightness. The heaviness of the appliance was not obviated by many modifications and adjustments made by the instrument-maker, whose adaptations so far as measurements was concerned often appeared trivial, but were of importance if a successful result was to be obtained. The opinion of the instrument-maker on the whole situation is not new, but it is none the less important. It is that it should be a routine for the "surgeon about to perform an amputation to take counsel with the artificial limb-maker in order that the precise site of the operation, flaps, and other details might be so devised as to make an artificial limb of the greatest possible service and comfort to the patient." These words he qualifies by the admission that he is not talking about urgent cases, but his strong opinion is that in the individual case, which led him to communicate with us, a slight change in the shape of the stump would have allowed the patient to be fitted with a lighter appliance, and would have spared a great deal of the time and trouble expended on modifications of the artificial limb in the course of the fittings. As it is certain that artificial limb-making can never be a matter of mass production, every appliance depending for its perfect fit upon individual and variable factors, there is much to be said for the instrument-maker's point of view—so much indeed that some surgeons always call the instrument-maker to their assistance prior to operation. "Amputation both in civil and military practice, equally on account of disease or injury, have to be performed to save the patient's life or, at least, to cut short an exhausting disease or to rid the body of a useless segment. These are the primary objects of amputations. The secondary object of an amputation is to provide a stump most useful and suitable for the attachment and use of a prosthetic appliance." This quotation from Mr. Muirhead Little's recent book, "Artificial Limbs and Amputation Stumps," indicates the necessity for coöperation between the surgeon and the artificial limb-maker. It is necessary for an artificial limb to be accurately fitted to the amputation stump. It is also advisable that the amputation stump shall be fitted for the reception of the artificial limb. It is still too often found when an amputation has been completed and the stump has soundly healed that it is not the best that could have been devised from the point of view of the prosthetic appliance. All surgeons must be prepared to carry out amputations, but all surgeons do not study the mechanism and fitting of artificial limbs, and all are therefore not familiar with the problems of the limb-maker. As a result of war surgery and of the segregation in hospitals such as Roehampton House of large numbers of patients who had suffered amputation, a great deal has been learnt about the best methods of performing amputations in order to render the stumps useful and to adapt them to the fitting of modern types of artificial limbs.

Observations derived from this experience are incorporated in such works as that of Mr. Muirhead Little and in Sir Robert Jones's "Orthopædic Surgery of Injuries," and it seems probable that this teaching has not received sufficient attention from the surgical profession, for complaints still frequently arise that the limb-maker, being unable to fit a stump in a satisfactory way, has expressed the wish that the amputation had been performed differently. It is not difficult to quote instances. Amputations through the tarsus (Charcot's amputation) are in many cases very difficult or indeed impossible to fit, and modern surgery condemns this method of amputation as being far less useful than a Syme's amputation. Amputations below the middle of the leg are equally awkward; the long stump gives no additional advantage in leverage, but it occupies a large section of the bucket of the artificial limb and necessitates the whole of the leg-piece being made thicker than is necessary, so that the limb is not symmetrical with its fellow. In addition, it is found that this long leg amputation leaves a stump in which the circulation in the terminal part is almost invariably bad. Amputations through the knee-joint and immediately above it are extremely awkward to fit, necessitating a heavy and cumbersome limb without giving any compensating advantages, unless in very exceptional cases, and in amputations through the hip-joint, if a bucket is to be comfortably fitted, the flaps must be kept sufficiently short to leave a firm and rounded stump, the flabby, loose stump resulting from the Furneaux-Jordan amputation being extremely difficult to fit.

It is most unsatisfactory for the patient if, after an amputation has been performed and the stump is soundly healed, he has to be told that some further operative treatment will be required before the limb can be satisfactorily fitted. It would appear to be reasonable that in all cases where the surgeon is not used to the fitting of artificial limbs and where he has to perform an amputation which is not a matter of urgency he should consult with the limb-maker in advance and possibly modify his methods somewhat in order that the stump resulting may be one to which an artificial limb can be comfortably fitted. Of course, the primary factors to be considered in fixing the level of amputation are the disease or injury for which the operation is being performed and the necessity for removing this adequately, but the level so fixed may be modified as the result of a consultation with the limb-maker and the method of cutting flaps, &c., may also be adapted with this end in view.

SOCIAL CAPACITY.

GOOD behaviour under close supervision in an institution may be nothing more than passive compliance with routine and affords no guarantee of social adaptability to the conditions of ordinary life. This is emphasised by Dr. R. F. Jarrett in an article which appears on p. 1059, and it is a point too frequently overlooked or at least imperfectly realised in connexion not only with the insane and the defective but also with the criminal, when the question of release is under consideration. Outside environment requires to be carefully selected in conformity with the mental qualities of the released prisoner, for, as Dr. Jarrett points out, while criminality in any individual case may be explained by the play of circumstances upon the personality, that personality, that inherent mental constitution upon which they play, is as important as, or perhaps more important than, the circumstances. It therefore becomes a matter of much significance to discover by some means what the individual's possible capacity for social adaptation is, and to this end many experimenters have suggested tests of various types. Among others Dr. S. D. Porteus, of the Vineland Training School, New Jersey, claims for his now well-known "maze" tests special value in this direction. Dr. Jarrett has applied these tests to 100 Borstal lads at the end of two years' training. The results he quotes would have been more valuable if he could have demonstrated the correlation of these results

with the actual social behaviour of the lads in after-life (for which he would, of course, have to wait a few years) or even with their social traits as revealed during their institution life. Dr. Porteus himself devised a social rating scale, in which certain mental qualities—planning capacity, executive ability, suggestibility, impulsiveness, excitability, irresolution, moodiness—were assessed by expert observers, and found a fairly high correlation to exist in persons of 20 to 30 years of age between these estimates and the maze tests results, much higher than that given by the Stanford tests. Observations of this or of an analogous type carried out on a fairly large scale are indispensable before reliance can be placed upon the maze tests as a social indicator. Some English observers are disposed to think that the qualities of foresight and planning capacity revealed by these tests are very superficial, and give but a poor index of the foresight required in daily life. Others have found some relation between the results and practical manual capacity in children. The qualities of intelligence lend themselves fairly readily to testing methods, but the temperamental qualities are elusive and not only may make a man's "actions" inconsistent with his "words," but also make his action at any one moment, which may be a moment of crisis, utterly inconsistent with all his previously known character. Adequate tests of a man's moral reactions are not yet forthcoming, and it does not appear to be the case that the Porteus maze tests are of great help in this direction, except in so far as they reveal impulsiveness and excitability of temperament.

THE SELECTION OF MEDICAL STUDENTS.

THE Argentine medical schools, and especially the one at Buenos Aires, are suffering from a plethora of students. Writing in the *Semana Medica* (Sept. 16th) Prof. B. A. Houssay voices the opinion of the majority of the teachers, when he says that the number of candidates for medical degrees ought to be limited by a previous inquiry into their physical, intellectual, and moral qualifications for the study of medicine. The Argentine, with a population of 11,000,000, in 1925 had 5800 students, whereas the United States, with a population ten times greater, had only 18,200. The number, moreover, is steadily increasing. In 1910 there were 2150, but in 1926 6960 students. Of the 700 or so who enter yearly at Buenos Aires, not much more than a quarter qualify, the remainder dropping out at various stages of their career. Hence the troubles of overcrowding are felt especially by teachers of the preliminary sciences, whose laboratory and class-room accommodation are quite inadequate and who are overworked in the attempt to give instruction, much of which is thrown away. Such a state of affairs cannot be in the best interests of the community or the medical profession, for an excess of students implies inferior training for those who will ultimately qualify. As for those who give up the struggle, they have spent a year or two in idleness or in work which may be of little value to them afterwards and have deferred their settlement in life—though the educational value of elementary medical training is, of course, considerable. And apart from these considerations a good deal of public money is often used up in the instruction of those who fail to qualify. Granted that limitation is needed, the method presents difficulties. Probably Prof. Houssay's suggestion that before entry there should be courses of study under the supervision of the Faculty of Medicine is as good as any. Properly devised and carried out, they should ensure that mere ability to get through examinations is not the only test of suitability for medicine, and that the student who is apt in scientific work is not excluded owing to failure in the ordinary curriculum. The method of *oposicion* (or disputation) recommended by Prof. Houssay in default of preliminary courses is probably unsuited to Anglo-Saxon, though in favour in Latin countries. To keep out mere wastrels some certificate of character may well be required from the school authorities, as it is hardly possible for a board of selection to arrive at an estimate of moral qualifications in a few minutes' interview. It should be noticed that all the best medical schools in the United States limit their numbers, presumably in proportion to the capacity of their class-rooms and laboratories, and this is only reasonable. Similarly, our English medical schools exercise a certain amount of judgment. Any early selection puts a heavy responsibility on the authorities, and there will always be cases of individual hardship, whatever method is adopted. The student whose mental development is somewhat retarded, or who has little aptitude for competitive work, may have the makings of an excellent doctor and will possibly suffer under a selective system; but he already suffers under examinations, and it cannot be to anyone's advantage to have an overstocked profession whose education has been marred by the inadequacy of the means of teaching. An excess of doctors is apt to lead to such stress of circumstances that dubious methods of making a competence are adopted, and whatever the advantages of a free system the fact must be faced that owing to the spread of higher education the number of aspirants to the medical profession is likely to increase rather than diminish.

THE NEW R.S.M. PROCEEDINGS.

THE new Editorial Committee of the Royal Society of Medicine has not been long in getting under way. This Committee consists of the President, Hon. Treasurers, and Hon. Secretaries of the Society, along with a representative of each of the 24 Sections. The Hon. Editors of the *Proceedings* are Sir William Hale-White and Dr. T. Watts Eden, and the first fascicle of the 20th volume, dated November, 1926, which reached us on Nov. 12th, contains reports of Sections which met so recently as the 8th, 14th, 15th, 20th, 21st, and 22nd of the previous month. The format of the *Proceedings* has always been agreeable and the illustrations excellent, but the new series has taken on a more orderly appearance in having a continuous pagination at the extreme head of the page for the sake of indexing and reference, and a secondary pagination for the members of the particular Section who may wish to bind separately the part of the Society's work in which they are specially interested. Author and title of paper also appear at the head of each page. All these changes, so desirable in themselves, and likely greatly to increase the usefulness of the Society to Fellows and Members unable to attend meetings with regularity, take the sting out of an article by Mr. Charles Frankenberger, Librarian of the Medical Society of the County of Kings, Brooklyn, a reprint of which has just reached us[1]. Mr. Frankenberger writes frankly of the troubles of medical librarians, finding most to criticise in the medical periodicals which, he says, comprise two-thirds of the collections of the larger libraries. His greatest grievance is in the matter of page numbering. The ideal is, from a book-making as well as from a library standpoint, one set of page-numbering of all text-matter comprising a volume, and, in the breaking of this rule, he finds the Royal Society of Medicine to have been the greatest offender with its "twenty-five separate sets of paging," now happily at an end. The title of a medical periodical should, says Mr. Frankenbeger, be short, and here, as on the previous heading, THE LANCET may take some unction to its soul, in contrast to Mr. Frankenberger's examples of titles such as *Archives des maladies de l'appareil digestif et des maladies de la nutrition*, and *Berichte über die gesamte Gynäkologie und Geburtshülfe sowie deren Grenzgebiete*. Other points on which this medical librarian sets value are that volumes should begin and end with a calendar year and that Roman numerals should be discontinued in bibliographies, indexes and reference work. He is annoyed at journals which cease publication without giving

[1] Reprinted from the Journal of the American Medical Association, August 21st, 1926.

notice of the fact and with others which change their title, or subdivide it into parts under other titles. And finally he pleads for standardisation in size, for his library shelves have to adapt themselves to the *Denver Medical Bulletin*, with its pages a trifle larger than a postal card, and to the *Voz Medica* of Madrid, which appears in newspaper form, 18 by 24 inches. We are glad that London medical publications are giving him but little cause for trouble.

ULTRA-VIOLET THERAPY IN A GENERAL HOSPITAL.

THE value and limitations of ultra-violet therapy can be assessed more truly from the statistics of big hospitals than from the results of personal experience. An article by Dr. A. C. Roxburgh in the November issue of *St. Bartholomew's Hospital Journal* deals briefly with the results of treatment during the past 21 months of 272 patients, exemplifying 56 different maladies. A complete list of the cases and details of their progress is given and the conclusions drawn are convincingly temperate. It is interesting to note that, in the treatment of lupus vulgaris, purely general treatment, while giving good results, is not considered to eliminate the necessity of local applications. Tuberculous peritonitis did not respond, more than half the patients being worse, or at any rate no better, after radiation. Many conditions responded in a variable manner, for the patient is the most variable factor in the treatment. It would be interesting to compare the results at St. Bartholomew's with those of other great hospitals, and we may hope that such statistics will be forthcoming.

LAUGHTER AND TEARS.[1]

Lord Knutsford's autobiography is a happy and successful man's informal record of what he has done and the environments therewith; it is the life of a social aristocrat, blended with that of an enthusiastic philanthropist and a capable business man. The book is full of good stories concerning kings and cabinet ministers, scholars and sportsmen, nurses and game-keepers, lowly people and social outlaws. There are passages, never elaborated and never gushing, recording the writer's intimate experiences among the suffering poor; they are moving to tears, but their appeal is accentuated by an instinctive determination to avoid what the Americans have taught us to call "sob stuff": the poignancy of these revelations is due to the simplicity of the telling. As we read we can see clearly that throughout his life Lord Knutsford has played many parts successfully exactly because in a sense he never *played* them, but *was* them; he was always himself, and realising the great chances which birth, brains, and temperament had given him for being thoroughly happy himself, he determined to use these chances in contributing to the happiness of others.

All interested in the management of large charities, and especially in hospital work, should read the book with its intimate account of the London Hospital. Mr. E. W. Morris's history of that institution may be well known to many of our readers, but Lord Knutsford's reminiscences make an admirable pendant to the work of the secretary of the institution. When, 30 years ago, Lord Knutsford was asked to take the chairmanship, the buildings, he says, were old and in bad repair, there was but one operating theatre for the 650 beds, one tiny room sufficed for all the bacteriological work of the hospital, there were no pathologists and no clinical laboratories, biochemistry was not thought of, and the accommodation for the nurses was disgraceful.

Many of these words could have been written about a majority of the other general hospitals, but the distinguished staff of the London Hospital at that date do seem to have been performing work which made the hospital famous in circumstances of unusual difficulty. Modestly, and dwelling rather upon instances of successful mendicity than of drastic material changes, Lord Knutsford describes the reorganisation, rebuilding, and refinancing of the hospital, giving in every direction full credit to devoted house committees, and to generous friends inside and outside the institution. It is a record of charitable work for which alone the volume was worth writing.

A fascinating book.

[1] In Black and White. By Sydney Holland, Viscount Knutsford. London: Edward Arnold and Co. 1926. Pp. 392. 21s.

THE VIENNA ANTITOXIN CONTROVERSY.

THE unfortunate accident which occurred[1] at Baden, Vienna, in October, 1924, when six children died after the injection of a mixture intended to produce active immunisation against diphtheria, is still the subject of controversy. The two sides to the dispute are taken by Grassberger[2], who was legally appointed as expert to investigate the matter and to examine the available stock of the incriminated batch of prophylactic, and by Busson[3 4], who with Loewenstein was apparently responsible for the making of the material. Grassberger, who made an exhaustive examination of all material available, concluded that the phials could be divided into two groups, one filled with material completely atoxic to animals, the other filled in error with toxin highly toxic to animals, and, unfortunately, to children. His conclusions were based on three lines of evidence. The children who were ill, and those who died, presented symptoms suggesting that they had all received approximately the same dose of toxin. Secondly, one group of phials contained material completely atoxic in guinea-pig tests, the other group material of uniform specific toxicity. In the third place, no antitoxin could be found in the toxic phials either by direct chemical test, nitrogen determination, or by tests based on the Dale anaphylactic-uterus method. Grassberger further tried by chemical and physical processes to make the atoxic toxin-antitoxin mixture toxic, but failed.

Busson bases his reply on the supposition that all the phials contained atoxic mixture when issued, but that owing to the influence of heat or cold or other agent during storage, the mixture had dissociated so that the toxin was released, and the mixture became highly toxic. He replies to all of the lines of evidence: the course of the disease was different in different children, and, therefore, the ampoules must have contained different quantities of toxin; there were fallacies in the guinea-pig test made during the official investigation, and the tests applied for the presence of serum were fallacious. He further states that Grassberger's own experiments show that an increase of toxicity can be obtained by the use of acids, alkalis, and freezing, and finally that an erroneous replacing of a bottle of mixture by a bottle of toxin cannot possibly have happened during the filling. Unfortunately, the controversy had reached the stage where an accusation of falsification of the laboratory note-books has been made and denied. We do not know if any further legal proceedings in Austria are in prospect.

Should Grassberger's hypothesis be adopted—and many immunologists seem inclined to adopt it—an important aspect of the matter must not be overlooked. The public cannot demand of any human being that he shall never make a mistake. We do not imprison a railway director every time a collision occurs, but we are justified in demanding of the responsible members of a serum institute not only a reasonable degree of skill, but a very high degree of vigilance in their work. Was this lacking at the institute in question? As regards such institutes in general, since the discovery of diphtheria antitoxin many millions of doses of material for injection into

[1] THE LANCET, 1924, ii., 1079, 1086.
[2] Archiv. für Hygiene, 1926, xcvii., 97.
[3] Cent. für Bakteriol., 1926, lxxxiii., 477.
[4] Med. Klinik., 1926, xlii., 1626.

human beings must have been issued, and accidents due to contaminated or faulty materials have been almost unknown. We can, therefore, feel fairly confident that the work is well and faithfully done. So far as prophylaxis against diphtheria is concerned, there is probably more skill and care required in its production than in any other material of the kind used by the physician. In this country mixtures containing toxin and antitoxin have found little favour with the practitioner; he has preferred to use injections, which contain not unaltered toxin, but harmless toxoid and some small amount of antitoxin. Such prophylactics appear to be equally efficient as immunising agents; and they have the great advantage of being safe, even if dissociation should occur as a result of exposure to extreme cold or to the action of any other physical or chemical agent.

MERCURY IN LATE SYPHILIS.

A REPORT[1] on the Effect of Treatment on the Wassermann Reactions of Syphilitic Patients, with special reference to the failure of mercury to prevent Wassermann relapses, has just been published by Prof. E. E. Glynn, Dr. R. E. Roberts, and Dr. Phœbe Bigland. The investigations recorded concerned over 700 cases treated at the Liverpool Royal Infirmary Venereal Clinic between 1918 and 1923. The main lesson to be drawn from this careful study, besides confirmation of the vital importance of immediate and thorough treatment of early cases, is that though mercury is usually efficacious in removing the clinical manifestations of syphilis, it is unjustifiable as a routine to treat a Wassermann-negative syphilitic with mercury alone with a view to the prevention of clinical or Wassermann relapses, or to the cure of the disease by the destruction of any residual spirochætes. In the authors' opinion a Wassermann relapse signifies renewed spirochætal activity, and, therefore, injury to the patient, though they admit that this is sometimes only potential. They conclude from their investigations that while mercury tablet courses certainly do not diminish the tendency to Wassermann relapse, grey oil courses definitely increase this tendency. It is not clear by what mechanism grey oil increases the tendency to relapse, but Prof. Glynn and his co-workers believe that the mercury, unable to attack the inaccessible residual spirochætes, depresses the patient's general health and the immunity on which the destruction of spirochætes chiefly depends. Since arsenobenzol preparations are more potent spirochæticides than is mercury, and since, moreover, they believe that resistant strains of spirochætes are probably developed by prolonged administration of the latter but not of the former, they recommend extra courses of salvarsan rather than mercury for the prevention of Wassermann relapses and the destruction of residual spirochætes. It will be noted by readers that the investigation covered the period 1918 to 1923, when the value of bismuth as an adjuvant in continuation treatment was not yet appreciated. In an italicised footnote to their conclusions the authors make it clear that their criticisms as to the value of mercury refer only to its administration in Wassermann-negative, latent or quiescent syphilis. They state here that its value in clinically active or Wassermann-positive syphilis is not questioned by them, though elsewhere (page 63) it is noted that in clinically active syphilis mercury alone rarely reduces the positive Wassermann to negative. The conclusions reached as to the failure of mercury continuation treatment coincide with those published by P. Fildes and R. J. G. Parnell in 1919—one year after the present investigation was started and four years before its completion—in the same series of Medical Research Council Reports. Of the work of Fildes and Parnell the authors were, surprisingly enough, unaware until their own conclusions were established. Throughout the report it is clear that the clinical importance attached to the Wassermann reaction by the Liverpool workers is very great. They admit that certain authorities regard a relapse to a positive Wassermann in late syphilis as not of necessity signifying spirochætal activity, but since even in the absence of clinical evidence the reaction is regarded as a reliable pathognomonic sign in early cases, they hold this attitude to be illogical, and maintain that the onus falls upon the sceptics to demonstrate at what period of the disease the Wassermann substance mysteriously changes its character and, therefore, its significance. Prof. Glynn and his colleagues themselves state in their introduction that "it will, of course, be realised that this is a study of syphilis at a venereal clinic, not at a neurological clinic, where the diagnostic value of the serum Wassermann is less, as in locomotor ataxia, &c." It seems that even they admit that there is a late stage in the history of syphilitic infection where the clinical significance of the Wassermann reaction becomes less important. Whether this stage is reached comparatively early or very late, the fact now seems to be definitely established that routine inunction of grey oil or the administration of mercury in tablets is not advisable when the disease is no longer active. This is a useful lesson, since the prolonged administration of a recognised cumulative poison is obviously undesirable unless a definite therapeutic result is to be anticipated.

[1] Medical Research Council. Special Report Series, No. 107. H.M. Stationery Office. Pp. 95. 3s. 6d.

MEDICAL FEES IN KENT.

THE Kent Panel Committee has been inquiring into the average fee charged by practitioners in that county to patients of economic position similar to that of insured persons. Of 692 forms sent out 458 were returned and the return was more complete than these figures suggest, since it was rare to receive more than one form from a partnership. Of the 458 only 321 were of use for the inquiry, the remainder having reference to practitioners in public services and institutions, or others who were no longer in general practice. The figures given in the table are based on 321 forms and are believed to represent the average position of some 450 general practitioners. The total number on the panel in Kent is 520. The forms were classified according to the density and type of population into four groups:—

(*a*) Industrial areas, such as Chatham, Gillingham, and south-east London.
(*b*) Urban residential areas—i.e., suburbs of the type of Bromley.
(*c*) Semi-rural areas—i.e., country towns and seaside resorts.
(*d*) Rural areas remote from towns.

The figures in the table between parentheses show the number of returns averaged in each case. The average fee is in every case a fraction of a penny below the actual finding, and where any fee was stated as ranging between two figures, the lower figure was taken in striking an average. The average number on the panels in each group was (*a*) 1303, (*b*) 666, (*c*) 847, and (*d*) 688.

	Area (*a*).	Area (*b*).	Area (*c*).	Area (*d*).	All areas.
Charge for—	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Consultation at surgery ..	2 9 .. (50)	3 5 .. (75)	3 0 .. (56)	2 10 .. (50)	3 0 (313)
Consultation with medicine ..	2 11 .. (51)	3 6 .. (61)	3 3 .. (49)	3 3 .. (50)	3 2 (287)
Medicine only ..	2 4 .. (49)	2 2 .. (55)	2 5 .. (46)	2 4 .. (50)	2 3 (273)
Visit (mileage extra)	3 7 .. (52)	4 1 .. (77)	4 0 .. (56)	4 0 .. (50)	3 10 (317)
Visit with medicine ..	3 11 .. (51)	4 2 .. (59)	4 4 .. (50)	4 6 .. (49)	4 2 (284)
Normal confinement	53 0 .. (46)	61 6 .. (73)	51 0 .. (53)	45 6 .. (48)	53 6 (299)

It will be seen that the charge for a confinement is 8*s.* below the average in the rural areas, which are

precisely those in which midwifery is most burdensome. Apparently the rural practitioner with a practice (as judged by his panel) half the size of those in industrial areas has but little advantage in other fees.

MILK AND TUBERCULOSIS.

THE relation between milk and tuberculosis, and the means by which the public should be guarded against the risk of tuberculous milk were touched on by a number of speakers at the National Milk Conference held at King George's Hall, Great Russell-street, on Tuesday of the present week. Mr. Wilfred Buckley, speaking from the chair, said that investigations into a large number of samples of milk, taken in various parts of England and Wales, show about 6·5 per cent. infected with tubercle. This does not mean that anything like 6·5 per cent. of cows are tuberculous, since the milk from one cow in a herd may contaminate a large quantity of otherwise uninfected milk. Dr. Harriette Chick spoke of the serious menace to the health of the community through the infection of children by drinking tuberculous milk. Koch's dictum that the proportion of human tuberculosis caused by the bovine type of the bacillus might be regarded as negligible is now, she said, completely discounted, and the present efforts at securing a safer milk-supply consist largely in attempting to remove the danger of tuberculosis among children. Dr. Nathan Raw, regarding it impracticable to eliminate all tuberculous cows, recommended the immunisation of calves immediately after birth, thus preventing them from acquiring infection in the stalls. In addition to milk itself, butter, cheese, and ice-cream might all harbour living tubercle bacilli. Dr. W. G. Savage said that some 3000 deaths a year in this country are due to tuberculosis of bovine origin. The argument is sometimes put forward that the loss is balanced by the immunity conferred by drinking milk infected with the tubercle bacillus. This implies the assumption that the bovine type produces a less virulent form of infection than the human bacillus. There is, however, no evidence to support this view; a clinician cannot differentiate between the two forms as manifested in the patient; only the bacteriologist can do so. The question of relative virulence has been confused, Dr. Savage thinks, with the question of mode of entry. If the same dose were given by the same mode of entry, it would be immaterial which type of the bacillus was ingested. To give living tubercle bacillus in uncontrolled doses is a haphazard and hazardous proceeding; if immunity by mouth is to be aimed at, it should be by graded and controlled doses. This point was taken up and emphasised by Mr. Neville Chamberlain in his presidential address at the afternoon session. The analogy with vaccination, he said, is not a fair one. Vaccination is carried on only by experts who know precisely what they are injecting, whereas nobody knows what dose of tubercle bacillus is carried in milk or what else the milk may contain. The remedy agreed on by most speakers was pasteurisation.

BRITISH RED CROSS SOCIETY.—An instructional film, showing the drill employed in applying the Thomas splint, will be shown at the house of the Royal Society of Medicine, at 5 P.M. on Monday, Dec. 13th.

THE LATE DR. G. P. JOHNSON.—The death occurred suddenly, on Nov. 8th, at his house at Barlaston, Stoke-on-Trent, of Gilbert Petgrave Johnson, medical officer of health for the county borough of Stoke-on-Trent. Dr. Johnson, who was 58 years of age, received his medical education at the University of Glasgow, where he graduated M.B., C.M. in 1890 and M.D. in 1894. He took the D.P.H. in 1893, and had been medical officer of health for the Potteries since the federation of the six towns in 1910. For some years before that he was in private practice in Stoke. Before going to Stoke, Dr. Johnson was senior resident medical officer at the City Hospital, Liverpool. A zealous and careful official, he devoted his attention particularly to child welfare, maternity health, and the abatement of smoke. He leaves a widow and two sons.

Modern Technique in Treatment.

A Series of Special Articles, contributed by invitation, on the Treatment of Medical and Surgical Conditions.

CXCVIII.—THE PROPHYLACTIC TREATMENT OF PROLAPSE.

IT is not intended here to discuss the nature of prolapse,[1] but rather its causes with a view to prevention; thus all that need be said in introduction is that "prolapse" will be taken in its widest sense as a generic term signifying the descent of the movable part of the pelvic floor and the viscera attached thereto. The chief difficulty in the problem before us lies in there being considerable doubt as to the precise factors responsible for bringing about prolapse, or rather as to their relative importance. That pregnancy and labour are the primary causes is shown by the vast predominance of the condition in childbearing women. Less than 5 per cent. of cases occur in nulliparæ. That prolapse does occur apart from childbearing shows, however, that, as in other forms of hernia, congenital maldevelopment or weakness of the tissues is an element in its causation, and, therefore, an intrinsic lower resilience of the tissues will likewise play a part in determining the effect of childbearing on women. The proportion of all childbearing women affected is a small one, and the problem is rather that of deciding what are the conditions during reproduction that especially predispose to prolapse.

The common idea is that direct trauma in the shape of perineal laceration is the immediate predisposing factor, but this simple explanation will not suffice. It has long been observed that complete perineal lacerations are rarely accompanied by descent. Most of them are, it is true, repaired at once because of the incontinence of fæces that results. But those in the service of a large hospital frequently see cases of complete perineal lacerations that have been neglected for 20 years or more and eventually come for treatment, but without any prolapse whatsoever. My own experience is that it is unusual to find the two together. On the other hand, laxity of the outlet is almost invariably associated with prolapse, whether in parous or nulliparous women. In the latter the descending mass distends the outlet, so that an overstretched outlet is clearly an effect as well as a cause. Probably, however, over-stretching, deep laceration of muscle-fibres, incomplete healing with fibrous union giving rise to gaping of the outlet play a considerable part in allowing of the bulging of the vaginal walls, especially under strain, and thus facilitating the common type of prolapse in which the parts are dragged down from below upwards. The levator ani pillars (pubo-coccygeus and -rectalis) close the outlet, and with their relaxation, from overstretching or other reason, the vaginal walls tend to bulge through between them as the abdominal contents do from separation of the recti muscles. Weakening of the thin muscular sheet (pubo-cervical) supporting the bladder will allow it to sag down with the anterior vaginal wall. Descent of the vaginal vault and uterus is due to injury and incomplete repair in the sheets of unstriped muscle and condensed fibrous tissue running from the vaginal vault and cervix to the pelvic wall. So long as they remain taut descent of the vaginal fornix and uterus will not occur. Prolapse of the posterior vaginal wall with a pouch of rectum is invariably associated with incomplete perineal rupture and adhesion of the posterior vaginal and anterior rectal walls.

In brief, then, it is the weakening of the attachments of the viscera to the pelvic wall that primarily allows descent to occur. A cystocele will arise from relaxation of the levator ani pillars and the pubo-cervical sheet, and once it is formed it will drag on the cervix. If the cervical attachments are loosened the uterus will be retroverted, so that it comes to lie in the vaginal axis, and then be dragged downwards, bringing with it the posterior fornix and posterior vaginal wall. If, however, the cervical attachments hold, the cervix may stretch and allow of descent of the hypertrophied vaginal cervix, but without descent of the uterus. Cystocele and rectocele may be present with the uterus in its normal position.

[1] The Treatment of Prolapse was dealt with in this series by Mr. Beckwith Whitehouse (THE LANCET, 1923, ii., 1313).

The Timing of Delivery by the Forceps.

The most contentious part of the question is raised when the events during labour most prone to cause weakness of the supporting structures are discussed. The start of the trouble is often ascribed by the patient to one definite prolonged or difficult labour, and probably one such will do more damage than many normal labours (e.g., a protracted second stage with instrumental delivery of an unreduced occipito-posterior position). Rapidly succeeding pregnancies and labours not allowing time between them for full recovery of tone in the supporting structures will also contribute to descent of the pelvic floor.

One rule of obstetrics cannot be broken without grave risk of prolapse, and that is the one forbidding extraction by the forceps before complete dilatation of the cervix. Perhaps the point of the rule would be clearer if it were expressed as extraction before the cervix is fully retracted above the head. If not retracted over the head the cervix is drawn down with the head and the more the cervix resists laceration and the more it stretches, the greater the tension on its all-important supporting structures. I have known of several patients in whom the cervix presented at the vulva soon after rising from lying-in after a forceps delivery. In these cases the less common form of prolapse occurs, in which the cervix and vaginal vault descend first, instead of the more common eversion of the vagina from below upwards. One such case I recollect particularly well—that of an elderly primipara whose first and only labour began in the small hours of the morning and was completed by forceps in time to allow her medical attendant to get home to a bath and breakfast.

The " high " forceps delivery, in which the head is dragged quickly through undilated passages, especially predisposes to prolapse by rapid stretching and possibly tearing of the supports of the cervix and vaginal vault. Powerful uterine action in a quick, natural labour may have a similar effect, particularly in those with feeble muscular tone. The much commoner " low " forceps operation has not the same risks as the uterine supports are not affected, and the soft parts down to the outlet have been gradually stretched by the head. Indeed, there is a considerable weight of evidence to indicate that the prolonged stretching by the head delayed on the perineum may weaken the muscles closing the outlet (in the same way as the prolapsing mass in nulliparæ) more than a timely application of the forceps—say after the head has been distending the outlet for two hours without expulsion being effected.

The Avoidance of Infection and Trauma.

Besides tearing and overstretching, superinvolution or defective involution with fibrosis of the supporting structures is generally accepted as a prominent factor in the causing of prolapse.

The most frequent cause of defective involution is infection with incomplete repair of muscle and replacement by fibrous tissue.

The morbidity-rate rises with all internal interference, while the higher up the tract the manipulation extends, the greater will be the trauma attending it. Therefore the first line of defence against prolapse will be the careful supervision of pregnancy. In view of the possibility of infection of the vagina and cervix from coitus during pregnancy, the danger of sexual relations in the last month or six weeks of pregnancy should be pointed out as part of the antenatal advice; similarly, sexual relations should not be resumed until at least a week after the lochia have ceased to be blood-stained, while abstinence for the period of involution is the ideal.

All complications calling for internal manipulation, especially those high up the tract, should be avoided. Antenatal examination has greatly lessened the number of "high" forceps operations and other difficult labours due to misfits and malpresentations. The more assistance in delivery can be narrowed down to the low forceps operation the less will be the disability due to prolapse. The strongest argument for manual rotation of the head in a persistent occipito-posterior position is that the undue stretching of the outlet involved in delivery with the occiput posterior is thereby avoided. Hence the principle in management is to allow as long a time as possible for rotation to occur before extracting, and, when delivery is called for, to attempt to make the head follow the normal mechanism.

The careful repair of all lacerations and a strict technique to prevent infection are the natural corollary to the foreseeing of possible complications.

The Management of the Puerperium.

The management of the puerperium presents another possible line of prevention. The revolt against strict rest in bed, introducing the early rising vogue, was due to a recognition of the evils of muscular wasting and general sluggishness associated with the old rigid system. The most generally satisfactory middle-course is that of modifying the routine for the individual patient, allowing her to rise to empty the bladder and bowels, encouraging movement in bed, and starting massage and physical exercises (bed gymnastics) so as to lessen physiological sluggishness whilst maintaining full nursing control and rest for the patient and ensuring her relief from other duties.

Bed exercises are valuable—breathing exercises for the abdominal muscles, contracting of the levator ani, by squeezing up as if to hold a motion, in combination with resisted movements of the adductors of the thigh and various leg and body movements. A particularly valuable exercise can be carried out as soon as the lochia become dark in colour and after sound healing of a perineal laceration—it is that of the contraction of the levator ani with the patient on her back, the knees drawn up, the feet flat on the bed, and the pelvis raised so that she is in the Trendelenburg position, thus taking the weight of the abdominal viscera off the pelvic floor. While " squeezing up " she is told to bring the knees together, the nurse or other attendant resisting this movement by holding the knees apart. Contraction of the adductors of the thigh and levator ani are associated movements that when made together bring both strongly into action.

For a couple of days before rising the woman should be made to sit on the edge of her bed for ten minutes or so, morning and evening, doing bending and heel and toe movements, and thus gradually accustoming herself to bear the weight of her body on her lower limbs.[1]

Should any complications be present to make the early adoption of bed gymnastics inadvisable, massage of the abdominal and back muscles and of the limbs may be substituted until the patient's condition permits her to begin active muscular movements. Frequent change of position and abdominal muscular exercises facilitate drainage from the uterus and vagina and so promote healing. These movements entail the discarding of the abdominal binder which should be reserved for special cases and at the most for a day or two after labour. It merely splints the abdominal muscles and lessens their physiological activity.

The Restoration of Muscular Tone.

Some women, especially those of an over-sensitive and introspective type, after resuming their household duties complain of backache and " bearing down "—doubtless due to weakness in the supporting structures—though little can be discovered in explanation of their symptoms. Usually these symptoms are aggravated by fatigue and especially by standing about, but it is difficult to persuade these patients to take the outdoor exercise that is essential to a restoration of their muscular tone. In some of them the uterus may be retroverted and bulky, showing laxity of its supports and subinvolution, or the outlet may be lax and bulge or gape on straining. Replacement of the uterus and a ring pessary for a few weeks with continuance of the exercises will help to give them confidence to take outdoor exercise and, so long as the pessary is not worn for more than three months or so, will do no harm.

In conclusion, the points to be emphasised in the prevention of prolapse are first to secure normal function and avoid complications in labour, especially those from malpresentations and misfits, and to prevent infection. Next a rational management of the puerperium, in which the restoration of function in the muscular supporting structures is the chief objective. Finally, on the return of the woman to her ordinary occupations, care should be taken to relieve symptoms indicating weakness of the supporting structures by efforts directed towards improvement of the general physique.

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[1] Details of these exercises may be found in the Practitioner's Encyclopædia of Midwifery and the Diseases of Women.

Special Articles.

MEDICINE AND THE PRESS.

DISCUSSION AT A MEETING OF THE HUNTERIAN SOCIETY.

AT a meeting of the Hunterian Society held on Nov. 15th at the Cutlers Hall, London, E.C., Mr. MORTIMER WOOLF, the President, presided over a large gathering of men and women.

Lord RIDDELL opened a discussion of this subject. He read the warning notice on advertising issued in June, 1923, by the General Medical Council, whose functions he outlined. He then read the manifesto published by the British Medical Association in July, 1925, in which the Association stated its position in relation to the practice of advertising and claimed to have influenced the G.M.C. to issue this warning notice. He deduced from these pronouncements that a doctor who wrote for the press under his own name took his professional life in his hands, and that a word of editorial praise might bring him under the ban of the G.M.C. The action of the G.M.C., a purely judicial body, in issuing a warning notice at the instigation of the B.M.A., without a test case, was he thought, probably illegal. The duty of the Council was to try cases of alleged infamous conduct, not to lay down rules. He was a strong trades-unionist, but could not approve of a trades-union, such as the B.M.A., exercising judicial functions, especially as it did not represent the whole profession. Moreover, the law, as laid down in the Court of Appeal, defined infamous conduct as that which would be reasonably regarded as disgraceful or dishonourable by his professional brethren of good repute and competency, and this conduct did not include the writing of articles to the press, so long as they did not exalt the writer or run down another practitioner. Lord Riddell suggested that, although bulletins served a useful purpose in informing the public of the progress made by an important man suffering from illness, the medical men who signed them might run the risk of being accused of advertising. Again, he asked why it should be improper to write a newspaper article and laudable to write a five-shilling book. It was open to any medical man to write a book, have it well reviewed, and print laudatory excerpts on the front page of THE LANCET where it would be much read by hypochondriacal laymen. Nobody wanted a race of advertising doctors, but he suggested that if medical authors were given absolute freedom the public demand for them would speedily end.

Sir HUMPHRY ROLLESTON expressed his agreement with much of what had been laid down by Sir Thomas Horder at a previous discussion on this subject. It was important to remove the impression shown by comments in the press that the medical profession was obstructive or adverse to health propaganda. Education of the public in the "laws of physiological righteousness" was an essential factor in the campaign against disease. The press was a great educator and its power for good or evil was unrivalled. Some public instruction in preventive medicine should undoubtedly be carried out in the lay press, but the public should be told much about preserving a healthy condition of body and little about the actual details of disease—in fact, only the early symptoms of grave conditions formed really valuable information. There was an essential difference between works on professional subjects and writing in the lay papers for an audience of possible patients. The less healthy people knew about disease the better for them. A periodic overhaul by a doctor would effectually relieve anxiety. The main question on which the lay press and medical opinion differed was whether or not articles in the lay press should be signed by medical men in practice, since the writers were inevitably advertised thereby and probably estranged their silent brethren. Unsigned medical articles were said to be poor copy for the press, but leading articles on other subjects formed and guided opinion. It seemed inconsistent that the press had unanimously condemned Sir Thomas Horder's suggestion of an advisory board of medical authorities who should guarantee the efficiency of the writer of an unsigned article. No doubt certain articles signed by eminent names had done great good, but if everyone were to write the door was opened to self-glorification and advertisement, and how was a line to be drawn? The press naturally wanted news, but what was new was not necessarily true and the public might well be led astray by honest enthusiasts. It was unlikely that the press would consent to publish only articles on general hygiene. On the whole, it was undesirable that men in practice should write signed articles for the lay press.

The idea that an eminent man could do things that a lesser man would not be allowed to do with impunity was widespread, but he had known of no instance that justified this impression; many persons at the top of the tree had been called upon to give account of themselves. Nor had he ever heard of anyone being hauled up for "conduct infamous in a professional respect" on account of a bulletin.

Mr. W. J. EVANS, disclaiming any knowledge of the difference between the G.M.C. and the B.M.A., said that the newspapers, especially the working journalists, had a distinct grievance; the journalists had been blacklegged as long as he could remember by members of all other professions, who demanded much more for their articles than the journalists obtained. The newspaper was the playground of the journalist and he was the only man who had the right to write therein. He would say for the doctors that they did usually write their own articles when they signed them. Not a newspaper in the world would be likely to publish an article on a "new cure" because no member of the profession would tell them anything about it. It was this extreme unwillingness to tell the facts that was responsible for half the trouble between the medical profession and the newspapers. He did not see what harm there could be in signed articles telling people what they all knew before. Medical news was at one moment a boom and after a boom came a slump; if medical journalism ceased for three months there would be no more demand for it. He suggested that the unfortunate word "advertisement" should be changed to "propaganda." The only possible harm followed articles which extended to regions where there was no fair measure of agreement, while much of the distrust of medical men arose from the fact that they so rarely said the same things.

Dr. E. GRAHAM LITTLE said that it was the intrinsic worthlessness of these contributions to the lay press that was troubling the medical profession; the difficulties of contributing information worth giving were almost insuperable. How far it was possible to convey serious information through the lay press should be the subject of consideration; he did not think that the columns of the lay press were the best place; even if the press would accept such serious articles the public would not believe them. Reports in the lay press usually extracted the frivolous part of a lecture and ignored its real purpose. The medical papers might be used, at least initially, for the exposition of medical advice to the public. It would be to the advantage of medical writers to learn to express themselves simply and to have the wise censorship of a trained staff of medical journalists. The committee of lay and medical representatives proposed by Sir Thomas Horder as a board of reference would be too cumbrous. There was more serious danger than was realised in giving premature publication to unsubstantiated scientific knowledge, and medical communications might come to be offered first of all to lay papers instead of being submitted to the cross-fire of medical criticism. Payment by results should not be applied to research work and the workers

themselves would much rather confirm their work before publication. The less reputable organs of the press were apt to regard medical subjects as so many opportunities for stunts. Another disadvantage of articles in the lay press was the focusing of individual readers on their own symptoms leading to a huge consumption of patent medicines. A healthy instinct was, he thought, a much better guide to such things as diet than any amount of advice in the papers.

Dr. J. M. BULLOCH expressed the opinion that if a medical man really wished to advertise, neither the B.M.A. nor the G.M.C. nor any number of associations would stop him. The name of a persistent contributor to small specialised journals was bound to filter through the "liaison journals"—as he termed THE LANCET and the *British Medical Journal*—to the daily press. The question of medical advertising in the press had arisen with the change that had taken place in the attitude of newspapers during the last 40 years. Whereas a paper used to be the servant of the public and news, now it printed news to support its own views, when it was interesting, and it might be impossible to stop papers dealing with a subject as interesting to the public as medicine. A paper could not afford to retain even medical students on its staff and had to try to deal with individual experts. It had once been considered indecent for a man or woman to mention personal ill-health, but now the subject was frankly discussed, and the present publicity given to illness was not the fault of the papers, which were meeting a public demand. Anonymous articles had gone by the board, and it was natural to require names for publication. The only influence that would check advertising was the good spirit of the profession itself. Medical men who wrote much fell in the estimation of their fellows.

Dr. LEONARD WILLIAMS said that the public no less than the profession had got into a state of militant hysteria on this subject. There never had been and never could be any such thing as a rule or law prohibiting medical men as such from writing under their own names in the lay press. The warning notice said that if members of the profession must write for the lay press they should remember that they were gentlemen and members of a gentlemanly profession; that was the gist of the whole matter. No one had ever been reproved or reproached by the General Medical Council for writing for the lay press. He had, however, two objections to the warning notice. One was that it went into the matter of the motives of the people who were supposed to have offended—a very difficult matter. Secondly, it was sent out to anybody who had written an article at the instance of anybody who notified the Registrar. So the machinery of the General Medical Council could be employed for private ends. Writing in the lay press under a name was not calculated to fill a consulting-room, in his experience. The British Medical Association was not the only Association that could act as "common informer" to the G.M.C.—there were the defence associations; but if the medical profession were dissatisfied with any of these bodies the remedy lay in electing to their government persons in whom they had more trust. The press, in many instances, was just as capable of judging when an article was objectionable to the public as was any ethical committee. He held that it was the duty of those of the profession who could write to educate the public. The elementary laws of health and personal hygiene had never been taught to anybody, and the result of "a silent profession" in the past was that the war revealed us as a C 3 nation. By remaining silent the profession laid itself open to the disgusting imputation that it pursued the policy in order that people might remain ill to benefit the pocket of the doctor.

Dr. T. HYSLOP said that this question would find its own level. We had heard much of it, expressed in language both temperate and intemperate. There was not much fear for the profession, as men who advertised would always fall in their fellows' esteem, but there was cause to fear for the sake of the public. If one column in a newspaper gave legitimate information on health matters, others talked the most contemptible nonsense. It was time a truce was called in what was becoming a tedious controversy; enough had been said to make every medical man realise the gravity of the situation.

Lord RIDDELL briefly replied, reiterating the view that the G.M.C. had exceeded its functions in the matter of the first warning notice.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Dublin University Biological Association.

ON Nov. 13th, in Trinity College, Mr. R. Atkinson Stoney, President of the Dublin University Biological Association, read an inaugural address on cancer. He covered the entire field of cancer research in a clear way, and discussed the various methods of treatment in vogue, concluding with the opinion that surgery, practised early, still offered the best prospect of cure or alleviation. Mr. Stoney went on to say that at the Royal City of Dublin Hospital they had started a special department for the treatment and investigation of cancer. They had taken over a deep X ray installation from the Coombe Hospital, and were enlarging the hospital and setting aside special wards for cancer patients. It was hoped before long to enlarge the scope of the hospital to embrace investigation of other methods of treatment.

A vote of thanks was moved by Mr. A. Fullerton, President of the Royal College of Surgeons in Ireland, who recounted several cases illustrative of the various problems which arose in regard to cancer. Prof. T. G. Moorhead followed, and made a plea for the education of the public in regard to the early symptoms of malignant disease. This plea was enforced further by Mr. W. Doolin, and Mr. K. L. G. Gunn discussed some broader questions arising out of the consideration of cancer.

A Research Institute for Cancer.

In Mr. Stoney's address to the Dublin University Biological Association he announced the establishment of a Research Institute for Cancer in connexion with the Royal City of Dublin Hospital. It is understood that the directors of the hospital, with the aid of a grant from the British Red Cross Society and of some subscriptions from private sources, have taken a house neighbouring to the hospital, and have fitted it with beds for patients suffering from cancer. Research will be carried on under expert guidance. A scientific committee has been formed, on which the various scientific bodies in Dublin, and the several medical schools will be represented. It is probable that a public announcement of the scope and intentions of the institute will shortly be made.

Physical and Mental Disorder.

In his presidential address to the Ulster Medical Society on Nov. 4th Dr. M. J. Nolan drew attention to the relationship between bodily disease and mental disorder. The normal mind he imagined as a team of physical and psychical factors working in unison, failure in which resulted in dissociation and loss of control. The transmission of the tendency to this failure constituted the so-called insane heredity, which, though not necessarily expressed, rendered the individual liable to breakdown under adverse circumstances. The failure might be of any degree—from idiocy to transient psychical disturbance. Discussing the physiogenic and psychogenic factors called for in official returns, Dr. Nolan suggested that the official factors were too restricted and that to "sexual excess" should be added "sexual deprivation, voluntary and involuntary," and that diseases of the endocrine and lymphatic systems should be included. He laid stress on the evil consequences of contraception as tending to excess. Alluding to the difficulties that faced general practitioners in regard to

certification, Dr. Nolan said that for all practical purposes Mercier's formula, "Insanity is a disorder of the process of adaptation to self," was the safest guide. The same basic instincts and emotions were in operation in all varieties of insanity, but combined in groupings different in kind and degree. The psychological types of character determined the particular form of insanity in each individual, and each individual must be regarded as an entity. In the majority of cases the onset of functional or organic disease could be definitely fixed as the starting-point of the obvious mental disturbance. The symptomatology of insanity, said Dr. Nolan in conclusion, necessitated segregation and treatment by specialists in mental disease, working with a medical staff dealing with general, medical, and surgical work, including pathology and research. The present system could not deal with so-called insanity as efficiently as it might be dealt with, and a more and intimate knowledge of the subject should be gained by students and practitioners.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Tuberculosis in India.

BEFORE leaving for England recently Dr. C. Muthu gave an interesting address on tuberculosis and its treatment in relation to conditions in India. Dr. Muthu has been doing a considerable amount of propaganda work in this country and has helped to create public interest. He has opened a free tuberculosis dispensary in Madras and a home in Pallavaram (Madras Presidency) for the treatment of the disease, and Government has provided land at Thambram for a sanatorium and garden colony which Dr. Muthu hopes to develop soon after his return from England. During his 27 years' campaign against tuberculosis, he said, he had found no specific remedy to cure the disease. All serums and vaccines for tuberculosis had been more or less failures in the long run, and the indiscriminate injection of tuberculin by qualified and unqualified men in India had done immense harm by rousing latent disease, thus killing more people than it had cured. Tuberculosis, he pointed out, was a constitutional disease, taking many years to develop, and there was no royal road to its arrest. The only cure was Nature's cure—the only treatment was to raise the patient's powers of resistance by fresh air, good food, better housing, and more healthy environment. Food, in Dr. Muthu's opinion, was more important than freedom. Tuberculosis was a poverty and filth disease, and it was the duty of Indian reformers and leaders to give attention to improving the health and efficiency of the people. Then, and then only, would a disease like tuberculosis gradually die out as it had done in other countries. Next to food in raising the vitality of the people was the care of women and children. In this connexion he strongly recommended that school hours for boys and girls should be changed to 7 A.M. to noon or 8 A.M. to 1 P.M., including a short interval; children could not take in any knowledge in the hot hours of the day, and the heat imposed a great strain on their growing brains. There was a demand now for tuberculosis sanatoriums all over the country, and this demand would become more insistent as time went on. Sanatoriums alone, however, would not get rid of tuberculosis, though their establishment was undoubtedly the first step, and a very important one. Its good effects would be seen in a few years in the education of the public in all matters of hygiene, sanitation, and right living, the after-care of patients being, of course, as important as sanatorium treatment. In combating tuberculosis, said Dr. Muthu in conclusion, there must be a combined and well-organised scheme to deal with all phases of treatment. This was the reason why a sanatorium and a garden colony met the needs better than a sanatorium alone.

Epidemic Diseases in Madras Presidency.

The annual report of the administration states that cholera was very severe during the year 1924-25 compared with the two previous years. In Trichinopoly, where 1511 deaths from this disease were reported, the outbreak is said to have been due to the failure of the protected water-supply owing to the bursting of the main at the time of the Cauvery floods. Mortality from small-pox fell from 2353 to 1623, and of this total Rajahmundry alone was responsible for 579, or more than a third of the total deaths. There was considerable improvement in the vaccination work, the number of successful cases rising from 92,880 to 133,491—i.e., from 37·1 to 53·3 per 1000 of the population. In addition, 35,352 cases were successfully revaccinated. Plague was responsible for 1955 deaths, as compared with 1331 in the previous year. Of this total 1165 deaths occurred in Salem alone, while Periykulam reported 256, Dharapuram 205, and Pollachi 204. Influenza was practically absent throughout the year.

Indigenous Medical Systems.

A month or two ago the Government of the United Provinces established a Board of Indian Medicine to advise the Government on all questions connected with the ancient systems of medicine. This Board, over which a layman presides, will prescribe courses of study, appoint examiners, confer diplomas and degrees, register practitioners, and distribute Government grants. The Government has also accepted a recommendation that the Ayurvedic College of Benares and the King's (Unani) Hospital at Lucknow be raised to the status of State-aided colleges. Discussing the work of the new Board, the *Pioneer* points out that although before the reforms the encouragement of indigenous medical systems was frequently discussed, it never got anything more than sympathy from the Government, and certainly such systems would never have been officially recognised. Yet, says the writer, whatever their abstract merits, the Ayurvedic and Unani systems inspire a certain amount of confidence in the people at large and it would be foolish to disregard the knowledge acquired and handed down through many generations. A more convincing argument, perhaps, is that the facilities for European medical treatment in rural districts are still meagre, and there is scope for Indian practitioners to do what they can in providing relief in these areas. Wherever the various systems are in competition they may safely be relied on to show their respective merits as time elapses. In Madras Presidency there are 13 Ayurvedic dispensaries and one Unani dispensary maintained by municipalities, and an application recently came before the Bombay Corporation for funds to maintain a local dispensary at which, it is stated, there is a large and increasing attendance.

Elimination of Malaria.

Some time ago Major H. W. Acton, director of the Calcutta School of Tropical Medicine, issued an appeal for funds to establish a chair of malarial research. His appeal is associated with the name of Sir Ronald Ross, who is shortly to pay a visit to India, and the chair would be set up in the hope that methods could be devised for eradicating the disease in the various districts of India, each of which presents its own problems. Commenting on the proposal, the *Times of India* says that "a memorial scholarship named after Sir Ronald Ross would be an excellent thing; but so long as what we are pleased to call the First City in India is 'reeking with malaria' such a memorial would be a gibe instead of a grateful tribute." A clean and healthy Bombay would be a more proper monument. For practical purposes, it is suggested, enough is already known of the habits of the mosquito, and what is wanted is an army of inspectors trained to deal with the breeding-places of anopheles. Such work should be undertaken and financed by the municipality, but owners of property where mosquitoes breed should be made to feel their responsibility, as in other parts of the world. A permanent advisory

committee will probably be set up to coördinate measures against malaria in Bombay, but will not be given executive power as the military, the G.I.P. railway, and the Port Trust authorities have their own staffs engaged in this work. The Corporation, it is stated, has ample powers for the reclamation of low-lying land.

Flannel Shirts.

The shirts of the army in India have hitherto been made exclusively of flannel, and no other material has been recognised by the Regulations; they have been issued impartially to all troops, whether suffering from heat or from cold. A new Army Order permits both British and Indian troops to maintain a couple of cotton shirts in place of the flannel. Too sudden and violent a reform, however, is guarded against by the provision that the Ordnance shall not issue cotton shirts and that their use cannot be allowed on service. The official reluctance to dispense with universal flannel is, of course, an expression of belief in woollen garments as a protection against chill, and is consistent with the use of body-belts in the tropics. A young soldier, free to wear cotton clothes, may be less careful to keep warm at sundown than the more experienced resident.

An Antirabic Centre.

During the year ending Feb. 28th, 1926, 572 patients were treated at the Pasteur Institute of Southern India, Coonoor. In addition 4644 patients received antirabic treatment at local centres. The report of the director, Lieut.-Colonel J. W. Cornwall, states that statistics collected over a number of years show that on the average 1 out of every 36 persons bitten by rabid animals dies of rabies after treatment with serum, whereas the death-rate amongst those untreated is 1 in 16. It is calculated that during the 12 years 1913–24 at least 60,000 people in the Madras Presidency were bitten by rabid animals, and that about one-sixth of them received treatment. At the end of February last the virus at the Institute was in its 973rd passage.

Medical Relief in the Punjab.

A scheme of medical relief formulated by the Punjab Government last year arranges for the opening of 375 dispensaries as soon as possible. One dispensary is to be furnished either for each 30,000 of population or for each 100 square miles of territory, as may be best adapted to local conditions. Besides rural dispensaries it is intended to have a hospital of 12 beds for each tahsil (corresponding roughly to a rural area) and a first-class hospital at the headquarters of each district (county). These hospitals will be centres to which the more serious medical and surgical cases can be sent from village dispensaries of the surrounding area.

An Indian Nursing Service.

A Nursing Service for Indian Troops' Hospital has been constituted as from Oct. 1st. This service will be formed of lady nurses recruited within Indian limits for employment in hospitals for Indian troops. The nurses will supervise, train, and instruct the nursing section of the Indian Hospital Corps.

A Bill for the registration of medical men in Delhi and the Frontier Provinces has been published. The Punjab Medical Council will control registration in these two areas, which will be represented on the Council by three members.

In accordance with the recommendations of the Cattle Committee appointed last year it has been decided to establish breeding herds at Patna and Cuttack, where there is a large demand for milk. At the Patna farm plant for pasteurisation will be provided.

Army contractors have submitted a petition against the proposed creation of a branch of the Navy, Army, and Air Force Institute in India to replace the Army Canteen Board which is being abolished.

Two prominent Parsis have made an offer of 32 lakhs of rupees (nearly £250,000) to build a medical hospital adjoining the King Edward Memorial Hospital so that this institution may be reserved entirely for surgical cases.

During 1925 over 642,000 rats, alive or dead, were sent by the Bombay municipality to the Haffkine Institute to be examined for plague. Up to the end of the year the Institute had supplied nearly 26,000,000 doses of plague vaccine, for which, it is stated, there is an increasing demand.

It is reported that about 500 prisoners in the Hyderabad (Sind) central jail have contracted scurvy.

The Lady Chelmsford All-India League for Maternity and Child Welfare is arranging a conference to be held at Delhi in February.

The annual report of the Madras Medical College notes an increased percentage of failures in medicine, surgery, and midwifery which is partly attributed by the principal to the change in character of the examination, greater importance now being attached by examiners to the clinical and practical sides of each subject.

BUCHAREST.

(FROM OUR OWN CORRESPONDENT.)

Competition against Doctors.

THE majority of Rumanian practitioners are having a hard struggle for existence. Some superficial observers believe that the cause of this is an undue increase of the number of physicians, and that we are approaching the so-called mental proletariat. Certainly this has something to do with it, but it is not the origin of the trouble. According to Dr. E. Spirt, who gave a lecture on this subject at a recent meeting of the Rumanian Medical Association, the real cause is the all-round illegal competition which the profession has to put up with. First of all there is the competition of medical students; some 80 per cent. of the students who have attended two sessions and learnt to give an injection and to use surgical dressings begin to practise at once, instead of attending the university lectures, and they freely advertise themselves in the papers. There is hardly a single family in Bucharest which has not a relative who is a medical student and whom they recommend to their friends, thus distracting a great number of patients from the qualified doctor. Dr. Spirt mentioned, for instance, the case of a fourth-year student who has at his home a gynæcological table and a regularly equipped consulting-room, and, of course, as such students do not pay taxes and have no family, they are able to treat patients at greatly reduced fees. Another anomaly is the attitude of midwives, who openly advertise that they receive and board female patients and obstetric cases. It would be difficult to find any midwife who does not practise not only gynæcology, but also general medicine—let alone the procuring of abortions, which is a side industry. It is strange that even the chemists, whose interests are allied to those of the medical profession—since doctors do not dispense their own medicines—do great harm as competitors. Most dangerous amongst them are those who have the degree of "doctor." Seeing this word on their boards, the public think that they are medical doctors, and this source of error is often exploited. Lately a case came before the County Court, where a pharmacist who kept a profitable consulting room in the outlying part of the city was sued for unskilful treatment, and fined by the Court. There is also a class of patients who never consult a medical man, but go straight to the chemist's shop, where, perhaps, they get medical advice from some junior apprentice and buy from him the most expensive medicines. Druggists, who are forbidden to sell compound medicines, do great harm to the doctors by selling specialties to patients without medical prescription, and by supplying them even with

opiates, morphine, cocaine, and ether, not to speak of corrosive sublimate, aspirin and pyramidon, which are sold wholesale as regular household remedies. Not less harmful is the competition of barbers and other quacks. Some of them affix the title of "Chirurg" (surgeon) to their name-plate, and perform minor operations, extract teeth, give injections, and apply surgical dressings. Recently a barber sued a "patient" for unpaid fees, and proudly alluded to a whole series of persons whose gonorrhœa, gonorrhœal rheumatism, and ulcers he had cured. The difficulties of the doctors are also greatly increased by the innumerable so-called Mutual Aid Societies against Death and Sickness; it is no exaggeration to state that in Bucharest alone there are 80 of these societies. Every one of them registers at least three or four thousand members, mostly families, and each employs two or three physicians, generally paying them 3,000 to 5,000 lei (£3 to £5) a year—less than the wages of a butler. By exploiting medical work at salaries which should rather be called tips, the societies manage to accumulate large fortunes. The Medical Association appreciates the importance of speedy action, and has appointed a commission to devise legislation for the remedy of this deplorable state of affairs.

Campaign against Veneral Disease.

In the post-war years the amount of venereal disease increased very considerably in Rumania. The increase is most noticeable in the small towns and villages, where the population—the clean, rustic folk—was more or less exempt from venereal disease before the war. The Rumanian Government realised at once that the best weapon against this evil is the enlightenment of the public, and accordingly organised several expeditions, in which skilled medical staff travel on caravan motor-cars from village to village, giving explanatory lectures on the importance of early medical treatment and on the prevention of these diseases. The motor-car is equipped with a small laboratory for treatment, and for taking specimens of blood. Explanatory leaflets are distributed among teachers, priests, and other intelligent men, instructing them how to carry on and continue the work thus begun. In large towns free dispensaries have been set up, where venereal cases get free treatment. The Chamber of Deputies passed a law obliging doctors to notify all fresh cases of venereal infection—omitting the names of the patients—and the data thus collected have shown a decided diminution in the number of fresh infections in recent years as compared with those just after the war. Notification has also revealed the fact that the institution of licensed houses does not in any way contribute to the decrease of venereal infection; it even shows that venereal disease is chiefly distributed by the brothels, where the resistance of men is considerably influenced by the action of alcohol. This has induced the Government to consider the abolition of licensed houses; from the end of this year the system will be discontinued in certain cities, and if the results are satisfactory the change will be made universal throughout the country.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

A Congress of Urology.

THE Seventh Congress of the German Society for Urology was held in Vienna during the first week of October under the presidency of Prof. Viktor Blum (Vienna). The attendance was large, and besides representatives from the German-speaking countries, a number of surgeons came from France, the United States, Italy, Switzerland, Russia, Turkey, and Czecho-Slovakia. More than 150 papers were read dealing with three main subjects—the pathology and treatment of anuria, the pathology and treatment of malignant growths of the bladder, and the significance and treatment of pain in urological practice. The last of these was discussed on the first day. Prof. P. Albrecht (Vienna) reporting on his experiments with general anæsthetics in urology, stated he had come to the conclusion that chloroform should not be employed in this work and advocated the use of dichloren, a comparatively new but useful and harmless anæsthetic.[1] Dr. O. S. Lowsley (New York) expressed himself as strongly in favour of local anæsthesia, and showed excellent photographs and films to illustrate his method of regional infiltration in urological operations. Dr. G. Illyés (Budapest) also recommended purely local anæsthesia, on the strength of experience in 700 operations on the kidney, besides work on the ureter and bladder. In the discussion the majority of the surgeons were in favour of the local method, and, in summing up, the president pointed out that the large majority of urological operations can now be done under local anæsthesia, which is, of course, especially useful where the condition of the patient makes general anæsthesia risky. Each case must necessarily be judged on its merits, for both methods have their advantages and disadvantages.

The opening paper on anuria was read by Prof. Theodor Fahr (Hamburg), who discussed the morbid anatomy of the condition, showed the atrophic state of the kidney-tissue, and the microscopical features of acute anuria, and emphasised the need for clinical observer and morbid anatomist to join forces so as to clear up the many problems which the condition still presents. Dr. Paul Jungmann (Berlin) pointed out that anuria can be produced by factors in the kidney itself (inflammation destruction of tissue) or by external factors such as a fall of blood pressure, or a loss of body fluids, or the action of toxins. The treatment of anuria—especially of the so-called reflex anuria—was discussed by Dr. Hans Rubritius (Vienna), who said that when there was no mechanical obstruction, decapsulation might be useful. On the whole, it must be admitted, the discussion did not bring out any very novel views of the development or treatment of the condition—except, possibly, a contribution by Dr. Lichtenstern (Vienna), stating that reflex anuria can only occur in the presence of an already damaged kidney.

Dr. L. Casper (Berlin) reviewed the methods of making the upper urinary tract visible by the use of liquids relatively impermeable to X rays. The problems of the physiology of the ureter and its occlusion were freely discussed and experiments were reported on production of cystic dilatation in the lowest part of the ureter and on denervation of the ureter, which causes, it is asserted, a dilatation of the renal pelvis.

The last day was devoted to considering malignant disease of the bladder. In spite of decided progress, the pathology and treatment of vesical tumours is still somewhat obscure. In the present state of knowledge the treatment should be radically surgical, but often it is ineffective, particularly as neither patient nor surgeon is willing to sacrifice the whole bladder where only a small carcinoma is present. No operation other than total extirpation of the bladder can, however, be expected to give satisfactory results in malignant disease, even where the lesion is of slight extent. In the discussion it was pointed out repeatedly that it is better not to remove a cancer of the bladder at all than to perform non-radical operation, for insufficient removal of the tumour is likely to cause rapid propagation of the disease. Ulceration and hæmorrhage can be controlled by intravesical methods such as fulguration or thermo- and chemo-coagulation, and the chief complaints can be soothed in this way. An interesting paper was contributed by Dr. Karl Scheele and Dr. Oppenheimer (Frankfort) on the Appearance of Vesical Tumours in Labourers Handling Aniline. They consider the formation of tumours in these workers to be due to chemical irritation by aniline and to its disintegration or splitting; the handling of end-products does not cause the lesions. Dr. Bauer (Vienna) has produced

[1] THE LANCET, 1926, i., 154.

vesical tumours by repeated painting with tar; these new growths, however, differ in their histology from all other known vesical tumours. Dr. F. Oehlecker (Hamburg) described the advantages of blood transfusion both before and after operation, and Dr. Salib (Constantinople) showed an interesting case in which there was a double penis and other malformations of the urogenital system.

Death of Prof. Ehrmann.

The name of Prof. S. Ehrmann, who died unexpectedly a few days ago, was well known beyond the narrow frontiers of our small Republic. Born in a Bohemian village in 1854, he took up medicine in Vienna and soon became celebrated amongst the students and professors for his gift for drawing. Prof. Brücke made him assistant in the Physiologic Institute, and there Ehrmann undertook his first important contribution to science—an investigation of the formation of pigments in the skin and the cause of the different colours of the various human races. Definitely turning to dermatology, he studied under Kaposi and Neumann. As long ago as 1887 he was investigating the course of syphilitic infection in the human body, and was working at the histology and physiology of the skin, thus laying foundations of our knowledge of the relations between skin diseases and metabolic changes. He was the first to show the presence of spirochætes in the nervous substance in tabes and general paralysis of the insane, and his excellent illustrations—all painted by himself—of skin conditions in health and disease, as published in his "Diagnostic Atlas of Dermatology," are remarkable in their technique. The fight against venereal diseases was part of his life work and he stood foremost in this campaign. He also attained an enormous private practice, owing to the knowledge and skill that he possessed. A very short, disproportionately built person, he had wonderful artistic feeling and knowledge, and got together a fine collection of treasures, besides assisting many artists and painters. In spite of severe handicaps through his religion—he was a Jew—he managed to attract a large number of students to his private laboratory and hospital wards, and his pupils have attained high standing all over the world.

SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

Medical Congresses at Pretoria.

A SERIES of medical congresses were held at Pretoria in October—the most important being the South African Medical Congress. The decision to form a Federation of the British Medical Association in South Africa and the South African Medical Association was the subject of congratulation by Lord Athlone, who addressed the delegates at a banquet held in their honour. He added that the Great War had opened our eyes to the number of persons who were unfit from preventable causes, and that there was now a widespread belief that the human wastage caused from ill-health could be very much reduced. It was to the medical profession that they looked for the guidance of the nation's aspirations towards better health, which were often confused and ill-directed, into proper channels. The child welfare conference was held on Oct. 12th. One of the most interesting papers contributed was read by Dr. J. J. Boyd, medical officer of health, Pretoria, on "Maternal Mortality and Morbidity." Dr. Boyd recommended that a post-graduate course for medical practitioners, trained nurses and midwives should be provided at several of the larger towns of the Union; also the establishment of antenatal clinics in larger towns. He advocated the control of midwives by the local health authorities, and a Government subsidy for qualified midwives in rural districts.

Dr. J. A. Mitchell, Secretary for Public Health, congratulated Dr. Boyd on his paper, and said that the Government Health Department felt the need for more statistical data. More and better trained midwives were wanted in South Africa, for unqualified, ignorant, and dirty midwives were taking a heavy toll of both mother and infant. Dr. Mitchell advocated a state-subsidised medical service for the rural areas. A paper on Birth Control, read by the Rev. J. B. Watson, was followed by a lively discussion. Mr. Watson, dealing with the need of a better race and with the tendency to over-population, considered that it would not be unreasonable to ask that the mating of the diseased, unfit, defective and degenerate should be prevented. There should be prohibition, he submitted, of early marriages. In one year in the Transvaal 700 girls under 17 contracted marriage. Dr. Jane Ruthven held, on the other hand, that the hindrances to marriage should be curtailed, and Mrs. Miriam Walsh (Capetown) and others pointed out the paramount value of white children to South Africa.

On Oct. 14th Dr. George Campbell, the new President of the Child Welfare Congress, proposed:

"That the necessity be urged for sterilisation of the mentally deficient, both white and coloured, where such incurability is an active menace to the patients themselves or to the welfare of future generations, or, alternatively, segregation in colonies, preferably farm colonies."

Sterilisation, he said, was an extremely simple operation which did not interfere with the life of those operated upon, and it was the duty of those who were fit to prevent the bearing of children who would be incapable of facing the world. It was often said that it was cruel to interfere with Nature, but in his opinion the unrestricted effects of Nature were more cruel still. The resolution was seconded by Dr. Shadick Higgins, who favoured segregation of the mentally deficient. Mr. A. A. Stanford, the Johannesburg children's magistrate, speaking of propagation by people of low mentality, said that one Johannesburg family had directly cost the State £2000. Dr. Campbell's resolution was passed with only six dissentient votes. After long discussion of a resolution favouring the teaching of contraceptive methods no decision was reached and the whole question of birth control was referred to the National Council of Child Welfare for investigation.

Massage and Medical Gymnastics.

The second annual meeting of the Central Governing Board of the South African Society of Massage and Medical Gymnastics was held at Johannesburg from Sept. 27th to 30th last. Delegates from the Cape Province, Natal and the Transvaal were present. The agenda included: (1) certificates to be recognised by the Society; (2) the proposal to establish a training school for physiotherapy at the University of the Witwatersrand; (3) action to be taken by the Society in regard to the position of members under the Medical, Dental and Pharmacy Bill; (4) a register of masseuses seeking employment to be kept at the Head Office, and by branch secretaries; (5) appointment of a Headquarters Committee in Capetown. Mrs. Dircks, the president, in the opening address, referred to the growth and wider recognition of the Society since its formal inauguration in December, 1924, and outlined the work that had been accomplished during the past year.

Plague Menace.

The grave warning issued by the Union Government Public Health Department to local authorities in regard to the menace of plague in connexion with seasonal increase of rodents has been followed by a big campaign against rats throughout the Union. In the plague outbreak of 1925-26 no less than 50 lives were lost before the danger was suppressed. It is again pointed out by the Public Health Department that the seasonal increase in the activity of rodents and fleas may be expected to occur within the next few weeks.

The Late Dr. Howell Davies.

Dr. Howell Davies, who has died at Pretoria, Transvaal, was born at Carmarthen in 1871, and received his medical education at St. Bartholomew's Hospital. At the outbreak of the Boer War Dr.

Davies went out to South Africa as a civil surgeon, and gained special recognition for services in connexion with the reorganisation of the large camp at Irene. After the close of hostilities Dr. Davies settled in practice at Pretoria. He was at various times president of the Pretoria Branch of the British Medical Association, and at the recent amalgamation of the B.M.A. with the South African Medical Association was elected Chairman of the Pretoria branch of the dual association. He acted as Government district surgeon for Pretoria, and for 15 years was honorary surgeon of the Pretoria General Hospital. Just before his death he was elected President of the 21st annual South African Medical Congress, held at Pretoria recently.

MEDICINE AND THE LAW.

Dangerous Drugs: "Direct Personal Supervision."

A MOST important decision of the High Court, given on Nov. 11th, explains the liability of a medical practitioner in the matter of keeping a register or day-book under the Dangerous Drugs Act Regulations of 1921, and places a common-sense interpretation upon the words "administration of the drugs by or under the direct personal supervision of a duly qualified medical practitioner" in the proviso to Regulation 4. It will be remembered that Dr. G. C. Kingsbury was fined £25 by the Lord Mayor a little while ago for having supplied morphine to a patient without entering in a register the particulars required by Schedule 1 of the Regulations, including the name and address of the person supplied. No suggestion was made which reflected on Dr. Kingsbury's character; the offence was regarded as entirely technical. The proved or admitted facts were that Dr. Kingsbury became a barrister in 1902 and practised law from that date, but occasionally gave medical treatment to old friends and patients without fee. Two of the latter sought his help to cure them of morphine addiction. The first of these was cured before the end of 1924; the other was treated by the method of gradual reduction, the daily dose being brought down to one-fiftieth of that taken by the patient originally. Dr. Kingsbury saw this patient every other day, even during his own holidays; at each visit he left the dose for the day and the succeeding day with instructions as to the time and method of taking it. He did not actually see the patient take the dose, but he was satisfied that he would have known if the patient was getting morphine from other doctors. Was this an "administration of drugs by or under the direct personal supervision" of a qualified practitioner? If so, Dr. Kingsbury was protected by the proviso to Regulation 4, which states that such administration is not to be deemed a supplying of the drug for the purpose of the Regulation which requires the keeping of a register or day-book. During the argument on appeal, the prosecution said that the words "direct personal supervision" were the strongest possible; it was emphasised that the patient might have taken his two days' supply in a few hours. Lord Hewart asked a pertinent question: "Suppose a doctor personally administers a dose of medicine to a patient at 11 A.M. and says, 'If his temperature rises a degree, give another dose to-night; otherwise wait till I see him again at 11 A.M. to-morrow'—would that be 'direct personal supervision'?" Mr. H. D. Roome, for the Director of Public Prosecutions, answered frankly in the affirmative, saying it would be oppressive to hold otherwise. This was really the crux of the case. It was true that another Regulation provided for cases of emergency, and counsel suggested that the idea might be imported into the proviso to Regulation 4 so that the doctor should only be protected under the proviso if the drug was taken in his actual presence or if it was a case of emergency. As the Lord Chief Justice observed, this was not what Regulation 4 said. He considered there had been direct personal supervision and, without discussing the amendment of the Regulations, he announced that the appeal must succeed and the decision of the Lord Mayor must be upset. The appellant had also argued that the Regulation was ultra vires, because the general words of the Act related to the manufacture, sale, distribution, and possession of drugs and not to the prescribing and dispensing of drugs by medical practitioners. The object of the Act was to stop improper drug traffic, not to interfere with the confidential relations between doctor and patient; the power in Section 10 of the Act, for instance, enabling constables to enter and inspect books, could hardly be taken to justify a policeman in entering a doctor's surgery and demanding to see the names and addresses of patients. The Court, having given its decision on another ground, did not require to deal with the ultra vires point, which may, however, be put forward again shortly in another appeal.

Milk Deficient in Fat: Unsuccessful Prosecution.

Once again the prosecution of a farmer for selling milk deficient in fat has failed. A charge at Walsingham Petty Sessions on Nov. 1st alleged that the sample contained only 2·61 per cent. of fat instead of the 3 per cent. which is the prima facie minimum prescribed by the Sale of Milk Regulations of 1901. Once again the defence seems to have been unable to rebut the analysis put forward by the prosecution, but once again the defendant escaped by calling evidence that the milk had not been tampered with. The farmer, who had otherwise an unblemished record in the matter of milk purity, explained that the milk roundsman had run short of milk and had come back for another two gallons. These were obtained from the milk of two cows which had recently calved. As is clear from the evidence at previous prosecutions the forepart of the milk drawn from a cow which has recently calved is deficient in milk-fat—a fact of which farmers are presumably aware. Thus it happens that, while the milk they sell is genuine and undiluted milk, the purchaser gets something below the prescribed standard and has no warning of the fact. The purchaser is safeguarded in the selling of certain other kinds of milk; the Condensed Milk Regulations, for instance, insist that condensed machine-skimmed or condensed skimmed milk (sweetened or unsweetened) is to be labelled "Unfit for babies." The same warning must be given on the sale of dried machine-skimmed or dried skimmed milk under the Dried Milk Regulations, which also provide that dried partly-skimmed milk (containing not less than 8 per cent. but less than 26 per cent. of milk-fat) shall bear the words, "should not be used for babies except under medical advice." The whole trend and purpose of the Sale of Food and Drugs Acts is to ensure that the purchaser gets an article of standard quality. Farmers will have only themselves to thank if public opinion demands legislation compelling them to declare by some means to the purchaser the fact that the milk sold is, or from the circumstances of the milking may be, below the standard of 3 per cent. of milk-fat. It is a matter in which the National Milk Conference may well give a lead.

The Kynaston Case.

Lieut.-Colonel John Kynaston, R.A.M.C. (retired), was fined £10 at the Central Criminal Court on Nov. 15th for aiding and abetting the obtaining of a dangerous drug (medicinal opium) contrary to a regulation made under the Dangerous Drugs Act of 1920. His name had been removed from the medical register in 1922, but he had continued to practise as a doctor, and on Aug. 25th he gave a prescription containing powdered opium to a patient suffering from nasal catarrh. The prescription was signed "Lieut.-Colonel John Kynaston, R.A.M.C. (retired), M.R.C.S., and L.R.C.P. (London)." The Dangerous Drugs Act and Regulations prohibit the possession of forbidden drugs except under licence or on the prescription of a "duly qualified medical practitioner." The prosecution said these latter words had only one meaning—namely, a practitioner whose name is on the medical register. The defendant said

"duly qualified" did not necessarily mean "registered." The jury's verdict was "guilty," and the Common Serjeant inflicted a nominal fine, taking into account the defendant's bona fides. Lieut.-Colonel Kynaston intimated that he would probably appeal, and, indeed, if there is any doubt as to the law, that doubt had better be promptly removed. It is, perhaps, remarkable that the various Dangerous Drugs enactments use so many different expressions to describe the doctor. The Act of 1920 talks merely of "medical practitioners" (in Section 7); the Act of 1923, in a passage dealing with poisons rather than dangerous drugs, speaks of the "registered medical practitioner"; and the Regulations of 1920 use the expression "duly qualified medical practitioner," coupling it with "registered dentist" and "registered veterinary surgeon."

The actual legal point before the Central Criminal Court was a narrow one. The defendant, as appears from his evidence, sought to enlarge the case by bringing in questions of the justice or injustice of the removal of his name from the register in 1922 for advertisement. These questions were irrelevant. If he claims that he did not advertise or that his advertisement was not improper, the Central Criminal Court is not a tribunal of appeal from the Medical Council. If he contends that the Medical Council acted with bias or that the Colleges had no legal right to deprive him of his diplomas, then his legal remedy lies elsewhere. As an offence against the Dangerous Drugs Act his offence was trivial, but the wider issues he raises are serious. What would be thought of a solicitor who, having been struck off the rolls, continued to call himself an admitted solicitor? Or of a barrister who, having been disbarred, claimed still to describe himself as a barrister-at-law? The more publicity Lieut.-Colonel Kynaston's case receives the more clearly appears the following truth, which the public has not always fully appreciated. Neither the absence of medical diplomas nor the absence of his name from the pages of the medical register prevents a man from practising as a doctor.

POLIOMYELITIS AT BROADSTAIRS.

THE following letters, referred to in our editorial columns, were issued to the parents of each child in a group of schools in the Isle of Thanet in connexion with the recent outbreak of poliomyelitis.

(I.) Oct. 20th, 1926.

Epidemic poliomyelitis (infantile paralysis) is unfortunately prevalent in certain districts in England.

The majority of the cases are mild and leave no permanent disability. On the other hand, a few of the cases are serious either on account of their severity or because some vital part of the nervous system happens to be attacked.

The disease is somewhat prevalent in the Isle of Thanet, and with a view to its prevention we are giving the following responsible opinions and advice in the interests of certain schools at Broadstairs.

The disease has an incubation period of not exceeding seven days, and is conveyed from person to person.

Its infectivity is greatest at the onset and often before the patient has shown any symptoms, but the infectivity declines rapidly when the disease is established.

A number of cases are so mild as to produce no appreciable feeling of illness and the individuals thus lightly attacked, though themselves escaping, are liable to infect their comrades.

Our advice is that all boarding schools in the district, whether they have cases or no, should isolate themselves from outside human contact, and for the time being become self-contained communities. If there are day scholars at any school they should for the time being cease their attendance.

We advise that each school as a self-contained community should continue its work and its play subject to certain modifications. Close assemblages should, as far as possible, be avoided or shortened, for instance, chapel services should be curtailed. Ventilation and open air which are prevalent customs in all schools should be given additional prominence.

The pupils of each school should wash the mouth and throat three times in the 24 hours under medical direction, together with other measures advised.

If these means are pursued parents may be assured that their children will be better protected than if the schools are broken up and for these reasons:—(1) A self-contained community like a school can be independent of the outside world, and, therefore, protected from infection; (2) the ordered life of work and play enhances resisting power.

In addition to the ordinary care of health pupils can be kept under skilled observation, and, therefore, the disease would be detected in its earliest stages, for it must be remembered that the symptoms may be so slight as to easily pass unnoticed not only by relatives, but even by a doctor, unless his knowledge of the prevalence of the disease would prompt him as a matter of routine to apply the special tests in investigating the case. Further, no instance has been recorded of a patient spreading this disease while under treatment in hospital.

During the period of quarantine, during which no boy or girl should leave the ground of his or her school, it is important that circumspection should be practised with regard to the visits of parents to the schools.

It may be added that Sir George Newman, the Chief Medical Officer, Ministry of Health, is taking such action in the general community in the Isle of Thanet as is practicable.

(II.) Nov. 5th, 1926.

We think it might be of assistance to parents if we were to issue a further statement concerning the epidemic of poliomyelitis at Broadstairs.

1. The measures taken have been successful. No fresh cases of the illness have occurred in the whole district since Friday, Oct. 29th.

Since the incubation of the disease is usually not more than three days, and never more than seven, it will be seen that the position is satisfactory.

To make the position, however, still more secure it has been decided to continue the quarantine in the schools for a period of three weeks from the last cases; thus, if the present favourable position continues, the quarantine of the schools will end on Friday, Nov. 19th.

2. In our opinion it will be quite safe for parents to pay their "half term" visits to their children on or after Nov. 12th. To ensure absolute security we advise on such "half term" visits parents should either stay in the schools or should take their sons or daughters by car to some place like Sandwich Bay where it is known no case of the disease has occurred.

3. As regards the return to school for scholars who have been removed by their parents on account of the epidemic, such scholars may be sent back to school 14 days after the occurrence of the last case in Broadstairs, that is, as at present advised, on or after Nov. 12th.

It will be necessary that such scholars should be isolated in or about their homes (that is avoiding all visits outside) for four clear days before their return to school.

The last part of their journey should be by car from Margate direct to the school. On their return they will be isolated at school for a further period of three days.

4. Anxieties have been expressed by some parents as to whether Broadstairs will in future be an infected area.

Such an idea is in exact opposition to the facts. The infection does not exist in *places*. Broadstairs, as a place, has never been infected.

The infection resides in certain people, and is conveyed from one person to another.

When this epidemic is over, as it promises very soon to be, Broadstairs will be *more* secure from this disease than the rest of the country, because those susceptible will have had it and immunity will have been established.

The letters were signed by Lord Dawson, Dr. James Collier, and Dr. E. G. Moon.

A CORRECTION.—We regret that the word "tabloids" was twice employed in our last issue (THE LANCET, Nov. 13th, p. 1027), instead of the word "tablets." "Tabloid" and "tabloids" are, of course, registered trade marks and can only be used to describe the special products of Messrs. Burroughs Wellcome. The error occurred in a communication from our Berlin correspondent.

LONDON STREET ACCIDENTS.—In the Metropolitan police district in the three months ending on Sept. 30th, there were 269 fatal and 26,727 non-fatal accidents, which is at the rate of more than 1000 fatal accidents and 107,000 non-fatal ones per annum. The largest number of mis-adventures was caused by private motor-cars, followed at a long distance, by commercial motors. Pedal cycles, which come next, were slightly more dangerous than motor cycles.

Public Health Services.

SCHOOL MEDICAL SERVICE.

THE following are statistics taken from the reports for 1925 of school medical officers in two districts.

Name of district.	No. on roll.	Av. elem. school attendance.	No. of routine children examined.	No. of special examinations and re-inspections.	Percentage of children found on routine examination requiring treatment.*
Warrington C.B. ..	13,180	—†	4,013	4,491	17·16
Nuneaton ..	7,789	6,667	1,133	8,308	13·3

* Excluding uncleanliness and dental defects. † Not given.

Warrington.

Dr. G. W. N. Joseph, in his thirteenth report on school hygiene, makes some interesting observations on the planning of new schools, and refers to the use of special glass which allows the passage of ultra-violet rays through the classroom windows. It is noted that, although verminous heads and impetigo have become much less common during the past six years, there has not been the corresponding decrease of enlarged cervical glands that might have been expected. The percentage of children showing very defective nutrition has grown from 0·9 in 1924 to 1·3 in 1925. An epidemic of measles started about the middle of June and went on till the end of the year. The number of cases was greater than in any other year of the Warrington records. In May, 1921, arrangements were made for treatment to be given twice weekly in every school in the borough, and results have been very gratifying. The nurses are said to be unanimous that this work at the schools is doing more good than the work previously done at the clinics. It will be seen that in 1925 only 18,553 school attendances were lost in consequence of minor ailments, compared with 104,453 in 1918—a saving of 85,900 attendances. Any extra cost involved by the larger staff of nurses can thus be practically defrayed by the large saving of grant. Children with enlarged tonsils and adenoids are operated on at the infirmary at or about 11 A.M. on Friday mornings, and remain there until 4.30 P.M. At this time the Health Department Ambulance removes them to their own homes. After the operation the child attends from time to time at the school clinic, where nasal douching, etc., is done if necessary. A leaflet on breathing exercises for the child is given to the mother, and a notice is sent to the head teacher of the school stating that the operation has been done, and asking that the child shall be corrected for mouth-breathing.

There are no open-air schools (day or residential) in Warrington. The account given of the Warrington occupation centre is interesting and valuable. An inquiry was made at the end of 1925 to see to what extent children needing spectacles continued to wear them after leaving school. A questionnaire was prepared, and the nurses filled in certain particulars in the course of their usual visits to the home. Altogether 163 children (83 boys and 80 girls) had left school during that time wearing glasses for the correction of defects that rendered the vision worse than 6/12 in at least one eye. Of these 163 children, 106 (56 boys and 50 girls), or 65 per cent., had discontinued wearing glasses after leaving school. This discontinuance appeared to be quite irrespective of the amount of visual defect present at the last examination. The report of the inquiry gives in detail the various reasons for which the children ceased to wear their glasses, and it offers so much food for thought as to be well worth reading in full.

Nuneaton.

Dr. P. G. Horsburgh points out that the number of routine inspections during the year was very low. This was due to epidemic of small-pox and to the change of school medical officers in July of the year. Small-pox, he remarks, is a disease of choice, but it is also an expensive disease, and lays a burden on the rates. Medical inspection revealed the very significant fact that only 9·2 per cent. of the children were vaccinated. Malnutrition and dietetic errors are commented on in an illuminating way. Dr. Horsburgh says that he has found that often the pre-tuberculous (non-infective) child is better attending school than if he is excluded from it for long periods. Often these children are kept at home and allowed to sit indoors over the kitchen fire most of the day, so that they do not get as much fresh air as they would if they remained in school.

A special clinic for the treatment of crippling defects is run in coöperation with the Royal Orthopædic Hospital, Birmingham. Cases requiring hospital treatment are sent into Birmingham, and the maintenance of each case is arranged for by the committee according to the home circumstances. In discussing the coöperation of parents, it is pointed out that those who refuse any form of treatment—fortunately few in number—are more often fathers than mothers.

INFECTIOUS DISEASE IN ENGLAND AND WALES DURING THE WEEK ENDED NOV. 6TH, 1926.

Notifications.—The following cases of infectious disease were notified during the week: Small-pox 302 (last week 131), scarlet fever 1873, diphtheria 1108, enteric fever 43, pneumonia 1095, puerperal fever 60, puerperal pyrexia 169, cerebro-spinal fever 5, acute poliomyelitis 36, acute polio-encephalitis 4, encephalitis lethargica 49, dysentery 20, ophthalmia neonatorum 127. There were no cases of cholera, plague, or typhus fever notified during the week. The increased incidence of small-pox is explained by the report of 263 new cases from the county of Durham. Only 15 of these were notified fron the county boroughs of Gateshead and South Shields; 153 from 8 boroughs and urban districts (Brandon-and-Byshottles reporting 98 cases); and 95 from 6 rural districts (Lanchester reporting 49 cases).

Deaths.—In the aggregate of great towns, including London, there was no death from small-pox, 1 (0) from enteric fever, 11 (1) from measles, 8 (0) from scarlet fever, 18 (3) from whooping-cough, 40 (12) from diphtheria, 101 (24) from diarrhœa and enteritis under 2 years, and 88 (14) from influenza. The figures in parentheses are those for London itself.

THE LATE PROF. F. M. CAIRD.

THE following appreciation of Prof. Caird has reached us from an old pupil: "Your obituary notice recalls many of Prof. Caird's great qualities, but omits one of his greatest. All through his career he was distinguished for his wonderful and unfailing kindness to his juniors at all ages. To him went students with their surgical troubles and from his kindness and help there arose many a lifelong friendship. One student remembers with gratitude his first winter in Edinburgh when laid up with a damaged knee. Mr. Caird, as he was then, came daily for six weeks across the meadows to cheer up a rather lonely youth and to keep him well supplied with books—no small expenditure of time and trouble for a busy man on one who at first was a complete stranger—a stage quickly passed and merged into a friendship that lasted to the end. Dozens of men must remember that little room at the top of his house furnished partly with treasured chairs from the old Infirmary . . . . Here all were welcome and here everything on earth was discussed and thither one took one's joys for congratulation and one's sorrows for comfort, and always came away better."

A DUNLOP CHILDREN'S BED.—Through the Dunlop Hospital and Benevolent Fund the employees of the Dunlop Rubber Co. have endowed a cot in the Birmingham Children's Hospital at a cost of £1000. Between two and three years were occupied in raising the money, and it is hoped gradually to endow other beds in the hospitals of the city.

Correspondence.

"Audi alteram partem."

HALOGEN ERUPTIONS WITH LESIONS ON THE TONGUE.

To the Editor of THE LANCET.

SIR,—It is pleasant to find that my short note on Halogen Eruptions in THE LANCET of Nov. 6th (p. 952) has called forth so interesting and informative a response from Dr. Parkes Weber. There is one point in the wording of his letter which, perhaps, I may be allowed to make more clear. His opening sentences might give the impression to anyone who had not read my paper that I had overlooked the case published by him in 1923, in which, as in mine, there was a lesion on the tongue. That, of course, is not the case, and I am sure that he had no intention of conveying such a meaning, because my words, which he quotes in full, were taken from an article published in 1906—that is, 17 years previously to the publication of his case. At the time that they were written, so far as could be ascertained from the then current literature, they were correct. No similar case in which the tongue was involved had been then recorded.

It is interesting to note that Dr. Weber looks upon defective renal elimination as playing a part in causing these fulminating outbreaks of iododermia after small doses of the drug. That, as I said in my note, was, for a long time my opinion, and it seems reasonable. Whether it does play any part or not it is evident from Dr. Semon's case that such a part is not essential, at least if defective elimination is to be estimated by the presence of albuminuria. Dr. Weber's concluding sentence raises a point of some historical interest. It is quite true, as he points out, that these rarer halogen eruptions have sometimes been diagnosed as syphilitic, and when this happened fuel in the form of further doses of iodide of potassium was promptly and hopefully added to the flames. This was, as he says, before the days of the Wassermann test. Perhaps it is hardly realised by the younger generation what changes this test has brought about.

Before its advent one of the most delicate and important functions which the specialist in dermatology was asked to perform, was to settle whether a given sore or rash was or was not of syphilitic nature. Some few dermatologists became extremely expert at this. They were quite as realiable in their decisions as are the most experienced connoisseurs in various branches of art, but like these they were occasionally deceived by clever imitations which was rather a serious thing to happen. The discovery of the spirochæte and the use of the Wassermann test have removed the supreme court of appeal for syphilis from the dermatologist's consulting-room to the laboratory of the pathologist, and in so doing have widened its sphere of influence in that cases can now be submitted for judgment not only where there is direct evidence on the skin or mucous membranes, but also where it is only indirect, as in lesions of the internal organs.

Science has here replaced art to the advantage of medicine. I am, Sir, yours faithfully,

Sheffield, Nov. 13th, 1926. ARTHUR J. HALL.

ASTRONOMY AND LETTERS.

To the Editor of THE LANCET.

SIR,—The review of Dr. J. H. Bridges's work and life, which appeared in your issue of Nov. 13th, emboldens me to draw attention to the curious inability of even scholars and well-educated writers to realise simple facts in astronomy. Bridges was a great social reformer, a scholar, and an eminently intelligent person, and yet I find that, besides making the slips which your reviewer pointed out, he made an extraordinary error as regards a star. On p. 140 of Mrs. Liveing's book I find a letter to his wife dated June, 1876, in which he speaks of a star to be chosen as especially hers.

"What shall it be? Not the red Arcturus which lifts itself up for a short space above the southern horizon at midnight and will be seen no more till summer comes again."

Bridges should have remembered his Hesiod, Works and Days, ll. 564–567.

Εὖτ' ἂν δ ἑξήκοντα μετὰ τροπὰς ἠελίοιο
Χειμέρι' ἐκτελέσῃ Ζεὺς ἤματα, δὴ ῥα τότ' ἀστὴρ
Ἀρκτοῦρος προλιπὼν ἱερὸν ῥοὸν Ὠκεανοῖο
Πρῶτον παμφαίνων ἐπιτέλλεται ἀκρονέφαιος.

And apart from that Arcturus can be seen both to rise and set about the middle of November. But the average writer seems to think that a star or especially the moon can be in any part of the heavens at any time of day or night, and at any season in the year which suits the convenience of the writer. The *locus classicus*, of course, is the passage in the first edition of "King Solomon's Mines," where Rider Haggard made an eclipse of the sun last for over two hours and that, too, on the day of the full moon. Another eminent and well-read living writer makes the full moon to be "just rising in the east" at a quarter before midnight in October in the south of England. As a variant on this another novelist has a fine descriptive passage

"Near the horizon line in the west the sun .... plunged precipitously downward. .... In the east a slender crescent shewed the moon at her birth!"

This, however, was on the west coast of Africa, where anything may happen and perhaps that is the reason why the author put a "!" after his statement. In future, however, we may hope that novelists and others will take pains to be more accurate, for one of the ablest novelists of to-day, Miss Rose Macaulay, has, with that devilish insight into human frailty which is so marked a characteristic of her work, said in "Crewe Train" p. 143, "Never mind, practically all novelists slip up now and then over the moon: it would be rather priggish and pedantic not to. The literary moon doesn't really matter." But after all, as an eminent analytical chemist and one whose life was spent on insisting on the value of essential accuracy, by name Sherlock Holmes, said, "What difference does it make to me or my work, whether the sun goes round the earth or the earth goes round the sun?"—I am, Sir, yours faithfully,

Nov. 15th, 1926. HIPPARCHUS JR.

GERMAN MEDICAL WOMEN.

To the Editor of THE LANCET.

SIR,—In last week's issue of THE LANCET your Berlin correspondent gives some figures regarding German medical women which appear to be based on insufficient knowledge or some misreading of the statistics. He states that there are 31 medical women in Munich, 15 in Frankfort, and *a total of* 327 *in all Germany*. For the correct figures and a very interesting analysis of them, I should like to refer him to an article entitled "Die deutsche Aerztin" in the last issue of the "Vierteljahrschrift deutscher Aerztinnen," the organ of the German Association of German Women Doctors which has already 626 members although it has not been in existence two years.

The real figures, based on the "Aerztliche Handbuch," would appear to be:

Large towns	943
Medium towns	279
Smaller towns and country	173
Total	1395

In Berlin alone there are 400, in Munich 84, and in Frankfort 31. The whole question of the irregular distribution throughout the provinces is an interesting one. Baden has the highest percentage of women doctors as compared with the population, and Upper Westphalia the lowest.

I am, Sir, yours faithfully,

L. MARTINDALE,
Hon. Sec., Medical Women's International Association.
Weymouth-street, London, W., Nov. 12th 1926.

THE CLOSING OF UPPINGHAM SCHOOL.

To the Editor of THE LANCET.

SIR,—The notice taken—and very naturally—in the general press of the closing of Uppingham School prompts a direct communication to the medical profession.

We have not had any cases of infantile paralysis in the Uppingham district, but an outbreak has occurred in Leicester and a few cases were reported on the other side of that county earlier in the autumn. It is within my knowledge that a considerable number of these cases have been treated in general and private hospitals without special precautions, and I am informed that no direct infections have been traced. Two cases have occurred in Uppingham School.

CASE 1.—The boy was attending school on Friday, Nov. 5th, reported "seedy" that evening, was removed to the sanatorium on Saturday morning with no definite symptoms—he did not feel really ill, and was, indeed, keenly interested in an inter-school football match. But on Sunday at midday it was evident that the attack was severe, by 10 P.M. respiration was seriously interfered with, and death took place about 6 o'clock Monday morning.

Our helplessness in this case impressed my colleagues, Drs. F. H. Wallace and A. R. Beaumont, as much as myself, and we resolved that in event of another case occurring we would employ mercurochrome as a remedy against the acute hæmic infection.

CASE 2.—The second boy was in morning and second school on Friday, Nov. 12th, returned to his house about 11 A.M., and was seen by me at 11.30, when he looked very ill, temperature 102·8° F., pulse 140, respirations 50. He was removed to the sanatorium, all the symptoms pointing to the general invasion stage of infantile paralysis—and a severe invasion it was. An intravenous injection of mercurochrome, calculated on the body-weight, was given; the patient was encouraged to drink large quantities of water and home-made lemonade. Within a few hours there was obvious improvement, pulse and respirations slowed down, and what had looked a really bad attack has not since given rise to grave anxiety.

To-day (16th) the boy is convalescent—no paralysis yet appeared; his knee-jerks are very dull—at one period they were absent; a very considerable experience of Kernig's sign during a cerebro-spinal epidemic in war-time did not impress me with its value in diagnosis.

Although I am not convinced of the patient-to-patient infection theory, on our Case 1 appearing the boy's house was isolated, arrangements were made forthwith for the *entire* servants, master, and school population to gargle and sniff a pot. permanganate solution. Now with reference to the closing of the school for 16 days we have been criticised. That is not unexpected particularly in a disease where the pathology is so vague that most conclusions are in the nature of guesses.

A circular letter was sent to parents by the headmaster after the first case. There was no panic amongst them and only four boys went home from the isolated house, though the parents urged that, as the boys were not working, their quarantine might well be spent at home. It was evident from some of the letters that in event of another case parents would demand the return of their boys in many instances.

There are 13 boarding-houses connected with Uppingham School and they are widely scattered. Some of them are in the High-street and open directly on to the street—the town is permeated by the school. Isolation of the school would be impossible; the conditions existing at Uppingham have no relation to any that might occur either in a preparatory school or in great schools where the school is itself a unit. I, am, Sir, yours faithfully,

W. DUNN, M.B.,
Nov. 16th, 1926. M.O., Uppingham School.

PS.—The letter sent by the headmaster to the parents was as follows:—

School House, Uppingham, Nov. 12th, 1926.

DEAR SIR,—A second case of infantile paralysis has occurred, and I have therefore decided to disband the school for a fortnight and two days. The incubation period is from 4 to 14 days, and although there is small risk that your boy has the infection upon him, he ought to be carefully observed until the period is over. Unless you hear to the contrary, the school will reassemble on Monday, Nov. 29th, and the term will end on Thursday, Dec. 23rd. I much regret any inconvenience to which this may put you. It is requested by the Minstry of Health that the medical officer of health of your district be informed of the reason of your boy's return from school. Yours sincerely,

R. H. OWEN.

PROF. CÉSAR ROUX'S RETIREMENT.

AFTER 39 years of active service as director of the Surgical Clinic and professor of surgery at the University of Lausanne, Dr. César Roux has retired. Born in 1857, Roux retained until his seventieth year the vigour and energy of youth, the Canton of Vaud raising the age-limit expressly on his behalf. Roux was the first pupil of Theodor Kocher, when the latter was appointed very young to the chair of surgery at Berne. The pair have been called the "old masters" of Swiss surgery, each being endowed with the qualities suited to the part of Switzerland, German or French speaking, in which he worked. Roux came from Orbe, a little village lying among vineyards on the slopes of the Jura, and was a true son of his beloved Pays de Vaud. During his strenuous life he instructed several generations of surgeons, and his pupils are now scattered over the whole country. The number of patients on whom he operated each year averaged something over 1500, and there is no Vaudois village between Vallorbe and Aigle which does not contain citizens, young or old, who owe their lives to him. His fame spilt over into surrounding countries, and few surgeons have had such an international clientèle. A Swiss correspondent writes: "Visitors to Roux's clinic, and they were many, were amazed at his ceaseless energy. From the moment he began to lecture at 8 A.M., until he finished operating at 1.30 P.M., he never ceased to talk or to be the driving power of the whole machine. Courteous, imperturbable, stimulating to his colleagues and students, and almost worshipped by the townspeople, he was fond of recalling the difficulties of his early boyhood, when his peasant parents lived and worked in the sunny front room of the hillside chalet, the children living as best they could in the cold, dark, airless room facing the hill behind. But there were always the warm cows to sleep with." When the surgeons of to-day were boys at school Roux was already one of the giants of surgery, a man whose name will live beside those of Lister and Kocher.

Medical News.

UNIVERSITY OF CAMBRIDGE.—Sir Humphry Rolleston, Regius Professor of Physic, has been elected as the representative of the University on the General Council of Medical Education for five years, in place of Dr. W. L. H. Duckworth, resigned.

At a congregation held on Nov. 13th, the following degree was conferred:—

M.B.—F. R. Sandford.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At an ordinary meeting of the Council, held on Nov. 11th, the President, Sir Berkeley Moynihan, stated that the vacancy on the Board of Examiners in Dental Surgery, occasioned by the death of Mr. Douglas Gabell, would be filled at the ordinary meeting of Council in December; that the vacancy on the Court of Examiners, occasioned by the resignation of Mr. Herbert S. Pendlebury, would be filled at the same time, and that two additional members of the Court would also be elected.—Alterations in Sections IV., VIII., XX., XXV., and XXVI. of the by-laws were approved, and the solicitor to the College was instructed to submit the new by-laws to the proper authorities for sanction and ratification.—A letter was read from Sir W. Morris Carter, offering to the College, in accordance with the instructions left by will, a portrait by Mr. W. W. Ouless, R.A., of the late Sir Henry Morris, Bart., past-President of the College. The portrait was gratefully accepted.—Diplomas of M.R.C.S. were conferred upon 179 candidates (155 men and 24 women)

who have passed the final examinations of the Conjoint Board. Their names have already been published in THE LANCET (Nov. 6th, p. 981).

The Secretary reported the death, on Nov. 4th, at the age of 69, of Mr. James Ernest Lane, past member of the Council and of the Court of Examiners. The following vote of condolence was passed: "The Council hereby express their deep regret at the death of Mr. James Ernest Lane and their sincere sympathy with his widow and relatives in their bereavement. Mr. Lane's services to the College as an examiner and as a member of the Council are remembered with appreciation, and since his retirement, his long illness, borne with patience and fortitude, has been a matter of sympathetic concern to his friends and former colleagues on the Council."

AMERICAN COLLEGE OF SURGEONS.—At the end of the clinical congress on Oct. 29th honorary Fellowships of the College were bestowed on Prof. Archibald Young, Sir Ewen Maclean, Prof. John Fraser, and Prof. David Wilkie.

ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE.—At a dinner to be held at the Hotel Victoria on Monday, Nov. 22nd, at 7.30 for 8 P.M., Lord Balfour will be the principal guest, and Dr. Andrew Balfour, President of the Society, will take the chair.

NO. 14 STATIONARY HOSPITAL, B.E.F.—The annual dinner of this hospital will be held on Friday, Dec. 10th, at the Trocadero Restaurant. Any members of the mess who have not received a notice and desire to attend should communicate with Major H. L. Tidy, 39, Devonshire-place, London, W.1.

BRITISH LEGION: BRITISH SERBIAN BRANCH.—The annual re-union dinner will be held on Saturday, Dec. 4th, at 7.15 for 7.30 P.M., at the Victoria Mansions Restaurant, 24, Victoria-street, Westminster, with Sir James Berry, the President, in the chair. All who served in Serbia are invited, together with their friends. Tickets may be had from Miss Marx, the honorary secretary, 24, Melcombe-court, Dorset-square, London, N.W.1.

THE LATE DR. SMITH WYNNE.—Dr. Graham Smith Wynne, whose death was announced recently, was born at Norwich of an old Norfolk family and was educated at St. Bartholomew's Hospital He qualified as M.R.C.S., L.R.C.P. in 1901, and after holding a house appointment at the Huntingdon County Hospital, settled in Amersham where he became medical officer to the Penn and Coleshill district. Dr. Wynne was a keen yachtsman and was 50 years of age. He leaves a widow.

NEW BRUNSWICK AND THE MEDICAL REGISTER.—On Nov. 5th the King in Council directed that "Whereas the Province of New Brunswick no longer affords to the registered medical practitioners of the United Kingdom such privileges of practising in the said Province as to His Majesty seem just," the Province shall no longer be deemed a separate British possession to which the Second Part of the Medical Act of 1886 shall apply. Practitioners registered in New Brunswick thus lose the right to enter their names on the British Register. Any persons, however, whose names have already been entered will not be affected by the change.

THE LATE DR. T. D. PATMORE.—Dr. Tennyson Deighton Patmore, who died recently at the age of 76, was the son of Coventry Patmore, the poet, and of his first wife, Emily Augusta Andrews—"The Angel in the House"—who died in 1862, leaving six children. Dr. Patmore went to University College Hospital and qualified as M.R.C.S. in 1875, later taking the L.R.C.P. Lond. and D.P.H. Camb. For many years he was medical officer to Wormwood Scrubbs prison and assistant surgeon to Woking Male Convict prison. Later he acted as medical officer at the head office of the Ocean Accident and Guarantee Corporation. Besides numerous yearly prison reports, Dr. Patmore wrote on Malingering and Feigned Diseases for medical dictionaries, and various articles in medical journals.

ROYAL SUSSEX COUNTY HOSPITAL.—In June, 1928, this hospital at Brighton will celebrate its centenary. To mark the event the governors have decided to extend the nurses' home, to provide new accommodation for the domestic staff, to carry out urgently needed structural alterations to the existing main buildings, and to provide accommodation for an additional 50 or 60 in-patients. The cost is estimated at £102,000, and in response to an appeal launched by Lord Leconfield, President of the hospital, on Oct. 27, some large donations have already been received. The increased size of the hospital will involve increased expenditure, and it is hoped also to secure an additional £10,000 a year to meet it. Annual subscriptions at present amount to only £4,300, which leaves about £25,000 a year to be found from payments by patients, by donations and by other voluntary efforts.

PRESENTATION TO A MEDICAL MAN.—The Committee and friends of Yeovil and District Hospital have presented Dr. C. J. Marsh, who has been its honorary surgeon since 1880, with a bust of himself, by Mrs Mitchell, A.R.B.A.

UNIVERSITY OF BIRMINGHAM.—Dr. T. L. Hardy has been appointed assistant to the chair of medicine, and Dr. C. C. W. Maguire hon. demonstrator in the department of anatomy. The Council has decided to ask the Court to confer the title of Emeritus Professor upon Prof. O. J. Kauffmann, joint professor of medicine in the University from 1913 to 1926.

ROYAL SOCIETY.—The King has approved awards by the President and Council of Royal Medals to Sir William Hardy, F.R.S., for his work on colloidal chemistry and the theory of lubrication, and to Prof. A. V. Hill, F.R.S., for his work on the physical and chemical aspects of muscular contraction. The President and Council have awarded the Copley Medal to Sir Frederick Gowland Hopkins, F.R.S., for his work in biochemistry.

PRINCE OF WALES'S HOSPITAL.—The annual dinner of the Reunion Association will be held at the Trocadero Restaurant, London, on Friday, Nov. 26th, at 8 for 8.15 P.M. Mr. J. B. Banister will take the chair. The price of the dinner will be 12*s.* 6*d.* (exclusive of wines) for members and their guests. The secretaries are Dr. Browning Alexander, 143, Harley-street, W. 1, and Dr. S. O. Rashbrook, 7, Wellesley-road, Chiswick, W. 4.

THE LATE DR. WILLIAM HOSEGOOD.—Dr. Hosegood, who died on Oct. 25th at the age of 65, was medical officer of health for the Cannock Rural District, where he had spent nearly 45 years. He was an Edinburgh man and graduated at Edinburgh University in 1881. For a time he served as medical officer of health at Amersham in Buckinghamshire, and then, going to Cannock, built up a large practice in the Cheslyn Hay district. Dr. Hosegood took a warm interest in local affairs and was a keen cricketer. He leaves a widow and several children.

VICTORIA BUSH NURSING ASSOCIATION.—The report of the Bush Nursing Association of the State of Victoria shows that at the end of June last there were 52 nursing and hospital centres at work. The centres are all run on the coöperative basis which experience has proved to be the best method of administering a Bush Nursing Centre. A householder pays an annual subscription varying from £1 to £3 10*s.*—the usual amount is 30*s.*—and for that sum obtains nursing for himself, his wife, and children up to the age of 18. The most important part of the work is midwifery and the care of infants and children.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this Society, with Dr. E. Rivaz Hunt, the President, in the chair, Mr. H. N. Fletcher showed specimens of pancreatic tumour and an enlarged mesenteric cyst, also microscopical slides, after which Dr. L. A. Parry gave an address on Some Well-known Medical Criminals less widely known than Palmer, Pritchard, and Lamson. His first example was a local one, that of Dr. Warder, of Brighton, who in 1866 poisoned his wife by means of aconite, and then, when suspicion was aroused, himself took prussic acid. Two previous wives had died under suspicious circumstances, and there is very little doubt that he also poisoned these. The Brighton case aroused very considerable interest at the time. Dr. Alfred Swayne Taylor, who analysed the viscera, said he was unable to find any poison at all, although he had carefully tested for all the well-known alkaloids, including morphia, strychnia, and aconitine, and that injections from the organs into a rabbit had had no harmful effect. Yet after hearing the medical evidence of the deceased's doctor, he was of opinion that aconite poisoning was the cause of death. The jury returned a verdict to that effect. Dr. Warder had been a lecturer on forensic medicine at the Grosvenor-place School, adjoining St. George's Hospital, and had come forward to give evidence in favour of Palmer. Among medical men who had been charged with high treason he alluded to Dr. Watson, acquitted for complicity in the Cato Street conspiracy; Dr. Bateman, hanged by Judge Jeffreys after the Battle of Sedgemoor, and in particular to Dr. Archibald Cameron, who took part in the Jacobite Rebellion of 1745, as medical officer in charge of troops. After the Battle of Culloden Cameron escaped to France, and when most of those who had taken part in the rising were pardoned, an Act of Attainder was passed, excluding certain persons from this indemnity, and Cameron, who was actively instrumental in the escape of Prince Charles, was among those named; when eight years later he returned to his native land, he was arrested and hanged as a traitor.

Parliamentary Intelligence.

HOUSE OF LORDS.

THURSDAY, NOV. 11TH.

Lead Paint Poisoning Bill.

Lord DESBOROUGH, in moving the second reading of the Lead Paint (Protection Against Poisoning) Bill, said that it dealt with a matter which had long exercised those who were interested in the welfare of persons engaged in this industry. Owing to the poisonous effect of the lead paint there was no doubt that it had to a certain extent damaged those who had had to use it. It was not denied that there was a very large number of cases which required amelioration, and that made the Government all the more determined, if possible, to pass this Bill into law as soon as they could. The opposition to the measure came from those who criticised it because the Geneva Convention had not been ratified. But he would point out that in any case, even if the Geneva Convention were ratified, the men would still require the protection which they hoped would be afforded them by these regulations. The Government did not intend to postpone indefinitely the other and bigger question, but in their view it would be impossible, owing to the state of public business and the very large opposition which existed in many quarters, to pass before Christmas a Prohibition Bill. Since the discussion took place at Geneva new methods, such as the use of waterproof sandpapers, had been devised, which enabled wet-rubbing to be done instead of dry-rubbing, and that would make the work much safer than it was at present.

Lord ARNOLD said that he regarded it as a very serious thing that the British Government should have broken the agreement come to at Geneva. It was not correct to say that the Government could not pass a Prohibition Bill. The Government had a majority of 200 in the House of Commons, and of about 70 in their lordships' House, and moreover the Opposition in the Commons would have supported a Bill which ratified the Geneva Convention. When other countries who signed the Convention found out that we had gone back on our word, they might also refuse to carry out their bargain, and this would make it more difficult to pass a Prohibition Bill in the future. He was informed that the process of wet-rubbing would do little or nothing to mitigate the evil.

Viscount HALDANE said that the Bill as far as it went would make things better, and he assumed that it represented what the Government considered to be the minimum required for safety. Women were not to be allowed to work at the industry, even on the new footing on which the Bill proposed to put it. He would be glad if the Government would give them a little more information on the question why women were supposed to be more susceptible to plumbism than men. He had read, of course, the statements made in the House of Commons by the chief medical officer and others, but those were very general statements, and were very vague. Nothing had impressed him more for a long time than the danger of accepting perfectly general medical statements of this kind without reasons which had been investigated being given. He confessed that he was sceptical on the subject, and he would like to know the scientific grounds on which statements to this effect were supported. He thought the Government ought to refer a question of this kind to the Committee of Civil Research, or some other body.

Lord BALFOUR of BURLEIGH said he was glad to hear what had fallen from Lord Haldane, because he was going to state his intention of moving an amendment in Committee that the exclusion of women should be omitted from the Bill. He knew that there were certain medical reasons which had become almost a dogma in the medical profession that women were more susceptible than men, but he would like to reinforce what Lord Haldane had said, and ask on what authority the statement was made. The exclusion of women meant that women's labour was forced to remain unorganised, and women were prevented from attaining in industry a position which both from the point of view of men and women it would be much better that they should occupy.

The Bill was read a second time.

HOUSE OF COMMONS.

WEDNESDAY, NOV. 10TH.

Naphtha and Safety of Dock Workers.

Colonel DAY asked the Home Secretary if his attention had been drawn to the dangers incurred by dockers engaged in unloading foreign coal owing to the presence of naphtha in such cargoes; and whether any action had been taken, or was contemplated, with a view to the safety of worker so employed.—Sir W. JOYNSON-HICKS replied: Special inquiry has been made, but no evidence of such dangers is forthcoming.

THURSDAY, NOV. 11TH.

Coroners and Deaths by Burning.

Dr. HADEN GUEST asked the Home Secretary whether his attention had been directed to the verdict of the coroner's jury on the deaths by burning of Mr. and Mrs. Rook and their infant child at a fire at No. 6, Borough-road, on Oct. 2nd this year; and whether he would consider the advisability of amending the Coroners' Bill by making the provisions of the City of London Fire Inquest Act applicable to the whole country, with a view to the adoption of methods of more efficient fire protection.—Sir WILLIAM JOYNSON-HICKS replied: The answer to the first part of the question is in the affirmative. The second part of the question appears not to arise, for it is already the duty of coroners everywhere in England and Wales to hold inquests on bodies of persons killed by fires.

Lead Poisoning in the Potteries.

Mr. RHYS DAVIES asked the Home Secretary whether his attention had been called to three serious cases of lead poisoning in one factory in the potteries during 1926 affecting young women aged 19, 23, and 24 respectively, one proving fatal; and what steps he proposed taking with regard to the use of lead in this factory in future.—Sir WILLIAM JOYNSON-HICKS replied: The three cases referred to occurred in a factory in which until this year no case of lead poisoning had been reported since 1913, about which time the factory was reconstructed; but it appears that recently the system of exhaust ventilation has not been maintained in an efficient state, and the matter has been actively taken up by my Department.

Housing Statistics.

Mr. TREVELYAN THOMSON asked the Minister of Health how many houses had been completed to date under the various Housing Acts, and how many were at present under construction, giving separate figures for municipal and private enterprise.—Sir KINGSLEY WOOD (Parliamentary Secretary to the Ministry of Health) replied: Up to the 1st ultimo, the latest date for which figures are available, the numbers of houses which had been completed in England and Wales with State assistance under the various Housing Acts were 270,406 by local authorities, and 196,465 by private enterprise. The numbers under construction under the housing Acts on Oct. 1st were 58,294 and 45,217 respectively.

Infantile Paralysis.

Captain FAIRFAX asked the Minister of Health if he had any further statement to make on the progress recorded in dealing with the recent outbreaks of infantile paralysis in this country.—Sir KINGSLEY WOOD replied: My right hon. friend is glad to say that the number of cases of infantile paralysis notified in Broadstairs and Leicester during the past two weeks was only 15, as compared with 54 in the previous fortnight. There were no fresh cases in Broadstairs last week. He would like to take this opportunity of stating that infantile paralysis is a disease which has been prevalent in this country for many years. It is one of a group of epidemic nervous diseases of which our knowledge is still very imperfect, but research is being prosecuted, and it is hoped that means will be discovered which will lead to the exercise of more effective control over its spread. His Department has closely watched the outbreaks, and a specially skilled member of his staff has visited the areas most affected to assist the local authority in providing for the supervision and control of the outbreaks.

Mr. EVERARD asked the Minister of Health the number of cases of infantile paralysis that have occurred each month since May last; and whether he had any further information regarding the cause of the disease.—Sir KINGSLEY WOOD replied: The number of cases of infantile paralysis (acute poliomyelitis and acute polio-encephalitis) notified in England and Wales each month since May last is as follows:

Notifications of Acute Poliomyelitis and Acute Polio-Encephalitis.

	A.Pm.	A.Pe.		A.Pm.	A.Pe.
May	18	3	August	148	16
June	29	3	September	215	7
July	56	7	October	319	54

Miners' Dependents and Relief.

Sir ALFRED KNOX asked the Minister of Health the average weekly relief paid by Poor-law guardians to the wives and children of miners during the coal stoppage; and how these amounts compared with the relief granted in former trade disputes.—Sir KINGSLEY WOOD replied: The exact figures sought by my hon. friend are not available, but it is estimated that in areas directly affected by the dispute in the coal-mining industry the expenditure on outdoor relief increased from May to October by an amount

equal to an average weekly expenditure of £223,000. In the same areas during the dispute of 1921 the average additional weekly expenditure is estimated to have been £65,400.

Approved Societies and Dental Benefit.

Mr. RHYS DAVIES asked the Minister of Health whether his attention had been called to the increased charges on the surplus funds of approved societies consequent upon the new agreement covering dental benefit; whether he was aware that a number of approved societies declined to operate the agreement because of those increased charges; and whether he would take steps with a view to removing the present impasse.—Sir KINGSLEY WOOD replied: The new agreement as to the scale of charges and conditions of service for the dental treatment of members of approved societies was arrived at by direct negotiation between representatives of the societies and of the dental profession with a view to securing a thoroughly satisfactory service. The new scale does involve some increased charge on the surplus funds of societies above that which would have arisen under the scale previously in operation, but the great majority of societies take the view that the additional advantages to be secured under the new arrangement justify the extra cost. My right hon. friend is aware that a few societies, representing a very small fraction of the total insured population, have not yet decided to adopt the new scale, but he does not think that the position calls for any special action on his part at the present time.

Replying to a further question by Mr. Rhys Davies, Sir KINGSLEY WOOD said: I have no reason to apprehend for a moment that the other societies which represent, I think, about 87 per cent. of the people insured, are likely to alter the existing arrangement to which their representatives agreed.

Mr. BLUNDELL: May I ask whether the hon. gentleman is aware that dentists are following in the footsteps of the doctors, and that unless some steps are taken, they may in very many cases obtain a rate of remuneration out of proportion to the services rendered?

Sir KINGSLEY WOOD: I have noticed it argued that both approved societies and members of the dental profession think that they have made a bad bargain. In these circumstances I am rather inclined to think that the arrangement is a fair one.

Deposit Contributors to Health Insurance.

Mr. NEIL MACLEAN asked the Minister of Health the number of Post Office contributors there were to the National Health Insurance; whether there were any surplus funds; and whether any special benefits were being provided to the contributors.—Sir KINGSLEY WOOD replied: The number of deposit contributors in England, Scotland, and Wales at the present time is about 271,000. The Deposit Contributors' Fund is made up of the sums standing to the credit of the individual deposit contributors, and there are, therefore, no surplus moneys in the Fund. The benefits to which a deposit contributor is entitled are the ordinary benefits under the National Health Insurance Acts so far as the balance to the credit of the contributor is sufficient to cover the cost of the provision of such benefits.

Producers and the Milk and Dairies Order.

Brigadier-General CLIFTON BROWN asked the Minister of Health whether he was aware that the Milk and Dairies Order, 1926, was causing many small milk producers in country villages expense which they could not afford, and that they must close down businesses which in some cases they had carried on without any complaint from sanitary authority for 30 years; and whether he would empower the local authorities in such cases to pay some compensation or grant an extension of time in which they must comply with the new orders.—Sir KINGSLEY WOOD replied: My right hon. friend has not heard of any such complaints, and he thinks that the producers to whom my hon. and gallant friend refers must be under some misapprehension as to the terms of the Order. Article 1 of the Order allows a considerable period of time to elapse before any of the provisions which involve any financial outlay become operative.

Dumping Refuse in Lower Thames Area.

Mr. LOOKER asked the Minister of Health whether he proposed to take any action to put an end to the practice of dumping refuse in the Lower Thames area, particularly as regards the dumps now existing at Purfleet and Tilbury and the new dump at Purfleet now in course of construction.—Sir KINGSLEY WOOD replied: As I have informed my hon. friend, these dumps have recently been inspected, and the inspection did not disclose that they are a menace to health. At the same time I may say that the general question of the collection and disposal of London refuse and the practicability of making improvements is the subject of detailed investigation at the present time, and in connexion with the investigation the dumps referred to are being kept under observation.

Out-relief to Miners' Dependants in Scotland.

Mr. JOHNSTON asked the Secretary of State for Scotland in what districts the payment of out-relief to miners' wives and children had been stopped; whether he was aware that there was serious privation in many districts; and whether he would take immediate steps to communicate with the authorities in those areas which had ceased to pay out-relief, with a view to a resumption of such payments.—Sir JOHN GILMOUR replied: I am sending the hon. Member a list of twenty-seven parish councils that have, according to the information in the possession of the Board of Health, passed resolutions to stop relief. Notwithstanding these resolutions, many of these parish councils have instructed the Inspector of Poor to give relief, where necessary, to prevent injury to health through destitution, while, in the remaining parishes in the list, the Board have advised the Inspector of Poor as to his duty to prevent injury to health. So far as the Board are aware, the Inspectors of Poor are acting on this advice, and the parish councils concerned are acquiescing. The Board are in close touch with the whole situation, and inquiries are made forthwith into any cases of hardship brought forward. No acute destitution is believed by the Board to exist, but any specific instances which the hon. Member cares to submit will be investigated.

MONDAY, NOV. 15TH.

Disability Pensions for Encephalitis Lethargica.

Mr. ROBERT MORRISON asked the Minister of Pensions whether any disability pensions were being paid in respect of encephalitis lethargica (sleepy sickness) due to war service.—Lieut.-Colonel G. F. STANLEY (Parliamentary Secretary to the Ministry of Pensions) replied: The reply is in the affirmative. I regret, however, that the statistical records of the Ministry do not enable me to state the precise number of cases.

Steel Houses in England.

Sir FRANK MEYER asked the Minister of Health the number of steel houses of different types that have been erected in England, and the number at present inhabited.—Sir KINGSLEY WOOD replied: The number of external steel or cast iron houses, the erection of which has been authorised in England and Wales, is 993, excluding those erected for demonstration purposes. Information is not available as to the number of these houses actually erected or inhabited.

Government and Lunacy Commission's Report.

Sir WILLIAM DAVISON asked the Prime Minister whether the Government proposed to introduce legislation to give effect to the findings of the recent report of the Royal Commission on Lunacy.—Mr. NEVILLE CHAMBERLAIN replied: The report of the Royal Commission is receiving careful consideration, and, until the recommendations have been examined in all their bearings, it is not possible to indicate the nature and extent of any legislation which the Government may be able to introduce.

Nursing Homes Committee's Report.

Mr. GERALD HURST asked the Minister of Health whether he had considered the report of the Select Committee on Nursing Homes; and if he intended to initiate legislation next session with a view to adopting its recommendations.—Mr. NEVILLE CHAMBERLAIN replied: The report is now under consideration, but I am not yet in a position to make any statement in regard to legislation to give effect to the Select Committee's recommendations.

TUESDAY, NOV. 16TH.

Distress in the Mining Districts.

The House went into Committee of Supply on a supplementary estimate of £3,250,000 for relief arising out of unemployment. Mr. J. F. HOPE, Chairman of Committees, was in the chair.

Sir KINGSLEY WOOD (Parliamentary Secretary to the Ministry of Health), in introducing the vote, said that statements had been freely made that starvation existed in certain areas of the country. While a dispute such as that which had been in progress in the mining industry involved, of necessity, discomfort and hardship, the officers of the Ministry of Health, who had throughout been instructed to keep in close touch with the situation, had been unable to find cases in which the guardians or their officers had failed to relieve destitution. The general effect of their information, so far as children were concerned, was that they were better off and healthier than when their fathers were at work.

Viscountess ASTOR said that when the mining dispute began she went all over Wales to see whether the children were starving. She had not found a single case of starvation. Harm was done by mis-statement of the case for the miners and their dependants. The truth was that many of the children under 5 years of age were being under-nourished and that was a tragic thing. Nearly 50 per cent. of the children under 5 years in Monmouthshire were under-nourished. Another real hardship was the children's lack

of boots and clothes. She hoped that when the strike was over there would be a non-party movement by the women of England to help the children to get boots and shoes.

Miss LAWRENCE moved to reduce the vote by £100.

Miss WILKINSON said that the statement that in the mining areas the children were better fed than when their parents were at work was an extraordinary falsehood with a veneer of truth. There was this modicum of truth in it, that where there were Labour boards of guardians, the proportion which was to be spent in food was higher than when the fathers were at work. But none of the other expenses of the household were being paid. There was nothing for clothes, boots, or any of the other necessaries of life.

Mr. BUCHANAN, referring to Lady Astor's remark that there was no privation or starvation among children, said that his brother, who practised as a doctor in a neighbouring division of Glasgow, said—and this would be borne out by other medical men there—that the housing conditions were scandalous and required radical and desperate treatment. Worse than the housing conditions, at present, was the underfeeding and actual privation that were prevalent in Glasgow. The Scottish Board of Health had issued a circular, as a result of which the parish councils had discontinued the payment of the extra 4s. which they had been giving. The parish council doctors found, when they went into the homes of the poor and examined the children, that they did not require medicine, but that they were in need of food. He personally knew of cases of starvation in his own division.

Viscountess ASTOR asked for the names and addresses of the people said to be starving.

Mr. BUCHANAN said that if Lady Astor would go to his division he would show her scores of people who were starving.

Viscountess ASTOR said that Mr. Buchanan had no right to make such assertions unless he could prove them.

Sir J. GILMOUR (Secretary of State for Scotland) said that it had been represented to him that there had been cases of starvation in Scotland. He had asked repeatedly for the names and addresses of any individuals in such a condition and had ordered investigations to be made by the staff of the Scottish Board of Health. He was satisfied that, apart from any question as to whether individuals were getting a sufficient amount of certain constituents in their food, so far as actual starvation was concerned no such cases had been substantiated. It had been represented to him that medical men had found, when called in to attend certain children, that what was required was not medicine, but nourishment. It was within the province of medical men to give a prescription for nourishment. If failure to do that had taken place, and it was within the knowledge of any Member, he asked that the cases should be brought to the notice of the Scottish Board of Health. Throughout the whole of the dispute in the coal industry the one object of the Scottish Office had been to see that food and other relief was provided where needed, and particularly for children. As a matter of fact, in spite of the dispute, there had been an improvement in the health of Scottish children. The allegation of starvation was utterly unfounded.

Mr. MAXTON said that probably there was no starvation in the highly technical sense of the word, as used in the State departments. But that there was serious hardship among Scottish children, arising from lack of food and clothes, and from malnutrition and physical deterioration, was beyond all doubt.

Mr. NEVILLE CHAMBERLAIN (Minister of Health), replying to the debate, said that on the whole the boards of guardians deserved the highest possible credit for the way they had handled a difficult situation. It had been surprising to read in the newspapers suggestions that the Ministry had been responsible for a policy of starvation, for it might not unfairly be said that the coal strike had been financed by the boards of guardians. Taking the 78 unions, in which 80 per cent. of the miners were comprised, the average weekly domiciliary relief given during the 1921 strike was £94,000. In the same unions, during the present stoppage, the weekly total was £312,000. How, then, was it possible to say that the policy of the Ministry was to cut down relief? It was a fact that there had been no evidence of malnutrition and there had been repeated reports that the children were actually better fed than they were when their fathers were at work. There must necessarily be hardship and suffering when one of the basic industries of the country had ceased to work. While there were administrative difficulties in the way of boards of guardians providing boots for necessitous children, he had told a deputation that he was sympathetic, and that he would be prepared to consider applications from boards of guardians to make some provision, to a limited extent, to voluntary organisations, where they existed, for providing boots for children. It was not a possible solution of the problem of necessitous areas to finance guardians by way of grants, as had been suggested by Labour speakers. By a system of block grants, when it was possible to allocate them on a fair and proper basis, taking into account not merely population, but also capacity to pay, as measured by rateable value, it might be possible to devise a scheme which would bring relief to necessitous areas without doing injustice to any other part of the country. That was the policy to which he looked forward for a permanent solution of the problem. He was only awaiting an opportunity to put that policy into effect.

The motion to reduce the vote was defeated by 215 votes to 81, and the vote was agreed to.

Disease among British Troops in India.

Mr. DAY asked the Secretary of State for War the personnel of the committee recently appointed by the Army headquarters at Simla to investigate the steps to be taken to combat disease among British troops in India.—Earl WINTERTON replied: A committee was assembled in Simla in October last to consider whether any modification in policy in combating venereal disease among British troops was desirable in the light of experience during recent years. The committee was composed of officers commanding the 2nd Battalion Lancashire Fusiliers and the 2nd Battalion Lincolnshire Regiment, the chaplain to Metropolitan, a consulting dermatologist at Army headquarters; the deputy-director, personal services, at Army headquarters; and the deputy-assistant adjutant-general at Army headquarters. The report of the committee is now under the consideration of the Commander-in-Chief.

Encephalitis Lethargica.

Captain FAIRFAX asked the Minister of Health if he would give the latest available figures for the cases of and deaths from encephalitis lethargica, and state what progress had been made in arresting this disease or investigating its causes.—Sir KINGSLEY WOOD replied: The total number of cases of encephalitis lethargica notified in England and Wales during the present year up to Nov. 6th was 1946, and the approximate number of deaths up to the end of August was 935. As regards the second part of the question, my hon. friend understands that the Medical Research Council will shortly publish a report on this disease containing a statement of the progress which has been made in the search for its cause. Until this has been discovered, and means have been devised for controlling the development and spread of the disease, it is necessary to rely on those methods which have proved efficacious in dealing with other infectious diseases.

Infantile Paralysis in Leicester and Broadstairs.

Captain FAIRFAX asked the Minister of Health how many deaths had resulted from the outbreaks of infantile paralysis in Leicester and Broadstairs.—Sir KINGSLEY WOOD replied: I would refer my hon. and gallant friend to the reply which I gave on this subject on Oct. 25th last. There have been no further deaths from infantile paralysis in Leicester since that date, but three more deaths have occurred as a result of the Broadstairs outbreak.

New Officials in the Ministry of Health.

Lieut.-Colonel HORLICK asked the Minister of Health how many new officials had been appointed by his department since Jan. 1st, 1926, how many were established, and what would be the total salaries payable for the present financial year as compared with 1920.—Mr. NEVILLE CHAMBERLAIN replied: 491 new officials have been appointed in my department since Jan. 1st, 1926, of whom 423 are established. The total amount provided for salaries in the estimates for my department for the current financial year is £1,466,214, as compared with an expenditure of £1,915,547 for the financial year 1920–21.

DONATIONS AND BEQUESTS.—Mr. Thomas Martin, Pollokshields, Glasgow, left £2000 to the Royal Hospital for Sick Children, Glasgow, to endow a "Margaret Inglis Sim" cot and £100 to name a cot the "Thomas Martin" cot, £1000 to the Glasgow Royal Cancer Hospital, to be used especially for research work, £1000 to Biggart Hospital Home, Prestwick, to endow and name the "Margaret Inglis Sim" cot, £500 to the Glasgow Poor Children's Fresh Air Fortnight, and Cripple Children's League, £1000 (or such sum as may be required) to the West Highland Cottage Hospital to name the "Margaret Inglis Sim" bed, and the residue of the property, subject to other legacies and certain annuities, in equal shares to the East Park Homes, Glasgow, the Maternity Hospital, Glasgow, and the Samaritan Hospital, Glasgow.—Mr. Samuel Murphy, Colinton, Edinburgh, solicitor, left £1000 each to Chalmers Hospital, Banff, Edinburgh Royal Infirmary, Edinburgh Hospital for Sick Children, the Hospital at Newington House, Edinburgh, for Blinded Sailors and Soldiers, and the Edinburgh Blind Asylum.

The Services.

ROYAL NAVAL MEDICAL SERVICE.

Surg. Comdrs.—G. G. Vickery to *President*, addl., for three months' post-graduate course; F. G. Hitch to *Marshal Soult*; A. E. P. Cheesman to *President*, addl., for course; A. C. Paterson to *Victory*, addl., for Haslar Hospl., temp.; and M. W. Haydon to *Tiger*, on recommg.

Surg. Lt.-Comdr.—B. S. Collings to *Marshal Soult* and to *Canterbury*.

Surg. Lts.—H. Gow to *Marshal Soult*; P. J. Maguire to *Tiger*; and J. L. Lean to *Victory*, for R.N. Hospital, Haslar.

ROYAL NAVAL VOLUNTEER RESERVE.

Prob. Surg. Lt. (D) L. A. T. McLean is confirmed in his rank.

Prob. Surg. Sub-Lt. D. R. W. Burbury to be Surg. Sub-Lt.

ROYAL ARMY MEDICAL CORPS.

Capts. to be Majs.: D. McKelvey, C. H. K. Smith, C. Wilson, H. N. Stafford (Prov.), and J. B. Fotheringham.

TERRITORIAL ARMY.

General List.—Maj. H. W. Symons to be Lt.-Col. and to comd. the 49th (2nd Northern) Casualty Clearing Station, vice Lt.-Col. (Bt. Col.) F. Darlow vacated.

Capt. F. W. Martin resigns his commn. and retains his rank.

Capt. J. A. L. Loudon resigns his commn. and is granted the rank of Lt.

Lt.-Col. C. Helm, Res. of Off., to be Capt.

Capt. T. L. Clark, late R.A.M.C., to be Capt.

Capt. D. Crellin, R.A.M.C., to be Div. Adjt., 46th (N. Midland) Div., vice Maj. E. A. P. Brock, R.A.M.C., vacated.

Capt. M. C. Paterson, R.A.M.C., to be Div. Adjt., 50th (Northumbrian) Div., vice Maj. J. M. Mackenzie vacated.

General Hospitals.—Lts. R. Riley and G. B. W. Walker resign their commns.

RESERVE OF OFFICERS.

Capt. (Bt. Maj.) J. B. Orr, from the Active List, to be Capt. (Bt. Maj.).

SUPPLEMENTARY RESERVE OF OFFICERS.

Capt. A. D. Gorman, late R.A.M.C. Spec. Res., to be Lt., and relinquishes the rank of Capt.

ROYAL AIR FORCE.

Temp. Capt. E. A. Wheeler, General List (Army), Dental Surgeon, is granted a temporary commission as a Flight Lt. on attachment to the R.A.F.

Flight Lt. J. J. Boyle (Capt., Army Dental Corps), relinquishes his temporary commission on return to Army duty.

INDIAN MEDICAL SERVICE.

Lt. W. Lawrie to be Capt. (prov.).

Sat Chit Anand, J. T. Fernandez, Lachhman Das Sarronwala, and Henry Brij Nath Swift to be Temp. Lts.

The King has approved the retirement of Maj.-Gen. Sir R. Charles Macwatt, C.I.E., K.H.S.

HONORARY SURGEON TO THE KING.

His Majesty has approved of the appointment of Maj.-Gen. J. S. Gallie, C.M.G., D.S.O., late Royal Army Medical Corps, to be honorary surgeon to the King, in succession to Maj.-Gen. D. J. Collins, C.B., C.M.G., late Royal Army Medical Corps, who has retired.

Medical Diary.

Information to be included in this column should reach us in proper form on Tuesday, and cannot appear if it reaches us later than the first post on Wednesday morning.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

MONDAY, Nov. 22nd.—8 P.M., ODONTOLOGY. Dr. E. W. Fish will read Further Notes on the Lymph Supply of Enamel and Dentine to open the discussion on his Original paper read before the Section on April 26th.

TUESDAY.—5 P.M., MEDICINE. Discussion on The Diagnosis and Treatment of Colitis. Dr. A. F. Hurst and other speakers.

WEDNESDAY.—5 P.M., COMPARATIVE MEDICINE. Dr. H. H. Scott: Tuberculosis in Captive Wild Animals as Compared and Contrasted with the Disease in Man.

THURSDAY.—5.30 P.M., BALNEOLOGY AND CLIMATOLOGY. Dr. R. Ackerley: The Spa Doctor's Contribution to the Improvement of National Health. The annual dinner of the Section will be held at the Café Royal at 7.30 the same evening. 8.30 P.M., UROLOGY. Clinical Pathological Meeting. Specimens will be on view from the afternoon of Wednesday, Nov. 24th.

FRIDAY.—5 P.M., STUDY OF DISEASE IN CHILDREN. (Cases at 4.30 P.M.) Cases: Dr. Rolleston: Case of Striæ Patellares following Typhoid Fever. Dr. Cautley: (1) Hemiparesis of Sudden Onset; (2) Intra-Pulmonary Cyst? Mr. Twistington Higgins: Case of Winged Scapula. 8 P.M., EPIDEMIOLOGY AND STATE MEDICINE. Paper: Dr. G. F. Buchan (M.O.H. Willesden): The Hospital in Relation to the Public Health.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY, Nov. 22nd.—8.30 P.M., Discussion on Recent Advances in the Treatment and Diagnosis of Bronchiectasis, to be introduced by Dr. Clive Riviere, followed by Mr. J. E. H. Roberts.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole-street, W.

MONDAY, Nov. 22nd, to SATURDAY, Nov. 27th.—FELLOWSHIP OF MEDICINE. Special lecture at the Medical Society of London, 11, Chandos-street, Cavendish-square, W. Thurs., 5 P.M., Mr. Harold Chapple: The Emergencies of Pregnancy and Parturition. Free to members of the medical profession.—ST. MARK'S HOSPITAL, City-road. Tues., 11 A.M., Mr. B. Leggett: Radiological Investigation of the Colon and Rectum. Free to members of the medical profession.—ROYAL LONDON OPHTHALMIC HOSPITAL, City-road. Wed., 12 noon, Clinical Demonstration. Free to members of the medical profession.—ROYAL WATERLOO HOSPITAL, Waterloo-road, S.E. Special course in Medicine, Surgery, and Gynæcology.—ST. JOHN'S HOSPITAL, Leicester-square, W.C. Special course in Dermatology. Practical demonstrations in pathology if desired.—ST. MARK'S HOSPITAL, City-road. Week's comprehensive course.—WEST END HOSPITAL FOR NERVOUS DISEASES, 73, Welbeck-street. Late afternoon course (5 P.M.), demonstrations upon selected cases. Further information from the Secretary.

UNIVERSITY COLLEGE, Gower-street, W.C.

WEDNESDAY, Nov. 17th.—5 P.M., Dr. C. H. Best: Insulin. (Third of four advanced lectures in Physiology.)

POST-GRADUATE HOSTEL, Imperial Hotel, Russell-square, W.C.

MONDAY, Nov. 22nd.—9 P.M., H. J. Patterson: Gastro-enterostomy.

THURSDAY.—9 P.M., Symposium: Cerebral Localisation in the Clinical Subject. The following will take part: Dr. M. Gordon Holmes (Chairman), Dr. W. J. Adie, Mr. Donald Armour, Mr. A. P. Bertwistle, Dr. Carmichael, Dr. Macdonald Critchley, Mr. L. Bathe Rawling, Dr. F. M. R. Walshe.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street.

THURSDAY, Nov. 25th.—4 P.M., Mr. Fairbank: Coxa Vara.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL, Gray's Inn-road, W.C.

FRIDAY, Nov. 26th.—4 P.M., Mr. Gill Carey: Diagnosis of Sinus Disease.

NATIONAL HOSPITAL, Queen-square, Bloomsbury, W.C.

MONDAY, Nov. 22nd.—2 P.M., Dr. Hinds Howell: Out-patient Clinic. 3.30 P.M., Mr. Elmquist: Demonstration of Re-educative Methods in Exercise Room.

TUESDAY.—2 P.M., Dr. Walshe: Out-patient Clinic. 3.30 P.M., Mr. Armour: Cranio-cerebral Topography.

THURSDAY.—2 P.M., Dr. Kinnier Wilson: Out-patient Clinic. 3.30 P.M., Dr. Gordon Holmes: Cerebral Disturbances of Vision.

FRIDAY.—2 P.M., Dr. Adie: Out-patient Clinic. 3.30 P.M., Mr. Elmquist: Demonstration of Re-educative Methods in Exercise Room.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

MONDAY, Nov. 22nd.—10 A.M., Mr. MacDonald: Genito-Urinary Operations. 12 noon, Mr. Simmonds: Fractures and Applied Anatomy. 2 P.M., Mr. Donald Armour: Operations.

TUESDAY.—10 A.M., Medical Registrar: Clinical Methods. 12 noon, Dr. Burrell: Chest Cases. 2 P.M., Mr. Sinclair: Surgical Out-patients.

WEDNESDAY.—12.15 P.M., Dr. Burnford: Medical Pathology. 2 P.M., Mr. Tyrrell Gray: Operations. 2 P.M., Dr. Owen: Medical Out-patients.

THURSDAY.—10 A.M., Dr. Grainger Stewart: Neurological Department. 2 P.M., Mr. Bishop Harman: Eye Department. 3 P.M., Sir Henry Simson: Gynæcological Wards.

FRIDAY.—10.30 A.M., Dr. Dowling: Skin Dept. 11 A.M., Dr. Pritchard: Modern Methods in Medicine. 2 P.M., Mr. Vlasto: Throat, Nose and Ear Dept.

SATURDAY.—9.30 A.M., Dr. Burnford: Bacterial Therapy. 10 A.M., Mr. Banks-Davies: Operations on Throat, Nose, and Ear.

Daily, 10 A.M. to 5 P.M., Operations, Medical, Surgical, and Special Out-patient Departments, Saturdays, 10 A.M. to 1 P.M.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY, Nov. 22nd.—10 A.M. Surgical Clinic. 2 P.M., Medical Cases in the Wards. 2.30 P.M. to 5 P.M., Medical, Surgical, and Gynæcological Clinics. Operations.

TUESDAY.—2.30 P.M. to 5 P.M., Medical, Surgical, Throat, Nose, and Ear Clinics. Operations.

WEDNESDAY.—2.30 P.M. to 5 P.M., Medical Skin and Eye Clinics. Operations.

THURSDAY.—11.30 A.M., Dental Clinic. 2.30 P.M. to 5 P.M., Medical, Surgical, and Ear, Nose, and Throat Clinics. Operations.

FRIDAY.—10.30 A.M., Throat, Nose, and Ear Clinics. 2.30 P.M. to 5 P.M., Surgical, Medical, and Children's Diseases Clinics. Operations.

On Wednesday, Nov. 24th, and Friday, Nov. 26th, at 2.30 P.M., there will be special demonstrations of Eye and Medical Cases by Mr. N. B. B. Fleming and Dr. F. G. Crookshank respectively.

LONDON SCHOOL OF DERMATOLOGY, St. John's Hospital, 49, Leicester-square, W.C.

TUESDAY, Nov. 23rd.—5 P.M., Dr. A. Whitfield: Diseases Due to Fungi (2).

THURSDAY.—5 P.M., Dr. J. H. Sequeira: Tuberculosis Cutis (1).

ST. JOHN'S HOSPITAL DERMATOLOGICAL SOCIETY (Incorporating the London Dermatological Society), 49, Leicester-square, W.C.

WEDNESDAY, Nov. 24th.—4.15 P.M., Clinical Cases will be shown.

ST. MARGARET'S HOSPITAL FOR WOMEN, Acomb-street, Whitworth Park, Manchester.

WEDNESDAY, Nov. 24th.—4 P.M., Mr. A. C. Magian: Electrotherapeutics and X Rays in Gynæcology.

UNIVERSITY OF SHEFFIELD POST-GRADUATE CLINICS.

FRIDAY, Nov. 26th.—3.30 P.M., at the Royal Infirmary: Mr. Mouat: Septic Infections of the Hand.

ANCOATS HOSPITAL POST-GRADUATE COURSE.

THURSDAY, Nov. 25th.—4.15 P.M., Mr. F. Holt Diggle: Tonsillectomy.

JAMES MACKENZIE INSTITUTE FOR CLINICAL RESEARCH, St. Andrews.

TUESDAY, Nov. 23rd.—4 P.M., Prof. Adam Patrick: Diabetic Coma. Discussion to be opened by Dr. A. Hynd.

MANCHESTER ROYAL INFIRMARY POST-GRADUATE COURSE.

TUESDAY, Nov. 23rd.—4.15 P.M., Dr. A. E. Barclay: Radiology in Relation to Medicine, Particularly to Compensation Work.

FRIDAY.—4.15 P.M., Dr. G. R. Murray: Adaptability in Disease.

ROYAL INSTITUTE OF PUBLIC HEALTH, 37, Russell-square, W.C.

WEDNESDAY, Nov. 24th.—4 P.M., Dr. C. W. Saleeby: From Heliotherapy to Heliohygiene.

CHADWICK PUBLIC LECTURES.

MONDAY, Nov. 22nd.—7.30 P.M. (in the Lecture Hall of the University of Sheffield). Mr. H. E. Stilgoe: Water-Supply in its Relation to Public Health.

Appointments.

FAIRER, J. A., M.D. Manch., D.P.H., has been appointed County Medical Officer of Health for Leicestershire.

JAGO, J. W., M.B., Ch.B. Sheff., Certifying Surgeon under the Factory and Workshop Acts for the Eyam District of the County of Derby.

SAVAGE, J. J., M.B., B.Ch. Oxf., F.R.C.S. Eng., Resident Medical Officer of the Freemasons Hospital and Nursing Home.

SMITH, A. GORDON, M.B., Ch.B. Edin., F.R.C.S. Eng., Professor of Anatomy in the Medical College, Ceylon.

St. Paul's Hospital, Endell-street, W.C.: MUTCH, N., M.A., M.D. Camb., F.R.C.P. Lond., Honorary Physician; O'DONOVAN, W. J., M.D. Lond., M.R.C.P. Lond. Honorary Physician in Charge of Skin Department; COOK, F., M.B. Lond., F.R.C.S. Eng., Honorary Gynæcologist.

University of Manchester: SUSMAN, W., M.D. Ontario, Lecturer in Morbid Anatomy and Histology; POLSON, C. J., M.B., Ch.B. Birm., Assistant Lecturer in Chemical Pathology; DOWNIE, A. W., M.B., Ch.B. Aberd., Assistant Lecturer in Bacteriology.

Vacancies.

For further information refer to the advertisements columns.

Brighton, Royal Sussex County Hospital.—Cas H.S. £120.

Brighton, Sussex Maternity and Women's Hospital.—Second Res. H.S. £100.

Bristol General Hospital.—Hon. Clin. Assts.

Cambridge, Addenbrooke's Hospital.—H.S. At rate of £130.

Cancer Hospital, Fulham-road, S.W.—Pathologist. £1000. Also H.S. At rate of £100.

Cancer Hospital, Fulham-road, S.W.—Jun. Radiologist. £500.

Canterbury, Kent and Canterbury Hospital.—Two Res. M.O.'s. At rate of £125.

Carlisle, Cumberland Infirmary.—Hon. Surg.

Central London, Throat, Nose and Ear Hospital, Gray's Inn-road, W.C.—Out-patient Registrar. £30. Also Asst. Out-patient Registrars.

Charing Cross Hospital, W.C.—Res. M.O. £400. Res. Anæsthetist. At rate of £100. Also Asst. P.

Chelsea Hospital for Women, Arthur-street, S.W.—Jun. H.S. At rate of £100.

East African Medical Service.—Two Asst. Bacteriologists. £600.

Eastern Dispensary, Leman-street, E.—Gynæcologist.

Evelina Hospital for Children, Southwark, S.E.—H.S. £120.

Great Yarmouth General Hospital.—H.S. £150.

Hammersmith School, Treatment Centre.—Surg. for Ear, Nose and Throat Dept.

Hampstead General and North-West London Hospital, Haverstock-hill, N.W.—H.S. Also Cas. Surg. O. to Out-patient Dept. Each at rate of £100.

Hospital for Sick Children, Great Ormond-street, W.C.—H.P. and H.S. Each at rate of £50.

Hull Royal Infirmary.—Asst. H.P. At rate of £130.

Ipswich, Heathfield Infirmary, &c.—Asst. Res. M.O. £250.

Italian Hospital, Queen-square, W.C.—H.S. At rate of £80.

Kirkcaldy Hospital.—Res. M.O. At rate of £125.

Lincoln County Hospital.—Jun. H.S. £150.

London Temperance Hospital, Hampstead-road, N.W.—Hon. P.

Lucknow University.—Prof. of Anatomy. Rs.1450 per mensem.

Manchester Northern Hospital for Women and Children.—Sen. H.S. and Jun. H.S. £130 and £100 respectively.

Manchester Royal Infirmary.—Res. M.O. £200.

Margate, Royal Sea-Bathing Hospital for Surgical Tuberculosis.—Two H.S.'s. At rate of £200.

Metropolitan Ear, Nose and Throat Hospital, Fitzroy-square. Anæsthetist.

Miller General Hospital for South-East London, Greenwich-road, S.E.—Asst. P. qnd two Asst. S.'s.

National Hospital, Queen-square, W.C.—Res. M.O. £200.

Nordrach-upon-Mendip Sanatorium, Blagdon, near Bristol.—Asst. M.O.

Norwich, Norfolk and Norwich Hospital.—Cas. O. and H.S. £120.

Oxford, Wingfield Orthopædic Hospital.—Res. Surg. O. and H.S. At rate of £200 and £150 respectively.

Prince of Wales's General Hospital, N.—Hon. Clin. Assts.

Queen Mary's Hospital for the East-End, Stratford, E.—Res. M.O., H.S.'s., H.P.'s., &c.

Royal College of Physicians, Pall Mall East.—Milroy Lecturer for 1928.

Royal Free Hospital, Gray's Inn-road, W.C.—Surg. Reg. £200. Med. and Gynæcological Regs. Each £100. Also H.S.'s., H.P., &c. £100 each.

St. John's Hospital, Lewisham, S.E.—Cas. O. At rate of £100.

St. Marylebone General Dispensary, 30, Marylebone-lane, W.—Hon. Asst. in Ultra-Violet Radiation Dept.

St. Thomas's Hospital.—Surgical Registrar.

Salford Royal Hospital.—Two Hon. Asst. S.'s.

Shanghai Municipal Council, Public Health Dept.—Asst. Pathologist. Tls.600 per mensem.

South Uist Parish and Northern Division.—M.O. and Pub. Vaccinator. £620.

Southwark Hospital, East Dulwich-grove, S.E.—Radiologist. 150 guineas.

Stockport Infirmary.—Three Visiting Anæsthetists.

University College Hospital, Gower-street, W.C.—Two Clin. Assts. to X Ray Dept.

Windsor, King Edward VII. Hospital.—Jun. H.S. At rate of £100.

The Chief Inspector of Factories announces the following vacant appointments for Certifying Factory Surgeons: Cannock (Staffs), Woolpit (Suffolk), Littleborough (Lancs), and Clacton-on-Sea (Essex).

Births, Marriages, and Deaths.

MARRIAGES.

ANDREAE—BROWN.—On Oct. 16th, at Mussoorie, India, Eric Burn Andreae, M.R.C.S., L.R.C.P., to Edith Muriel Brown, younger daughter of the late Rev. Alexander Brown and of Mrs. Brown, Trevail, Grampound.

DICKINSON—CLARKE.—On Nov. 15th, at St. Mary Abbot's, Kensington, C. R. Dickinson to Gladys Maud Clarke, L.R.C.P., M.R.C.S.

MURRAY—LAING.—On Nov. 10th, at Queen-street Congregational Church, Arbroath, John Murray, *M.C.*, M.B., Ch.B. Manch., to Agnes Ferguson, elder daughter of David Laing, T.D., M.D., and Mrs. Laing, Arbroath.

DEATHS.

FRY.—On Nov. 9th, Walter Ernest Fry, M.R.C.S., L.R.C.P., D.P.H., of West Kensington-gardens, W.

PALMER.—On Nov. 12th, at Stoke House, Gosport, Hants, Charles John Linton Palmer, M.R.C.S., L.R.C.P., aged 54 years.

RANDLE.—On Nov. 14th, suddenly, Horace Andrews Randle, M.D., of Pendleton, Lancashire, and Birkbeck-road, Acton, W., aged 71.

REYNOLDS.—On Nov. 12th, 1926, at 730, Fulham-road, S.W., Joseph Henry, M.B., C.M. Edin., the dearly beloved husband of Blanche Reynolds, and son of James Reynolds, Esq., of Gloucester, aged 56.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Comments, and Abstracts.

GARAGE ACCIDENTS.

WITH the growth of motoring has grown also the tale of motor accidents, and an inconspicuous but none the less an important and interesting class of these take place in the garage. A few garage accidents are caused by the mishandling of electric current or by starting the engine with the gear in, but the majority are due to poisoning by exhaust gases. Although motoring is thirty years old, and the first warning against the danger of running an engine in a confined space was published twenty years ago, a very small number even of professional drivers are aware of the deadliness of exhaust fumes. The reason for this ignorance is possibly that carbon monoxide, the lethal constituent of these fumes, kills without leaving any obvious trace, and many garage deaths are wrongly ascribed to apoplexy. The presence near the body of gastric contents is likely to mislead the police or local practitioner into suspecting an alcoholic condition, and the symptoms, if observed, support the mistake. In other cases epilepsy and petrol poisoning are wrongly suggested as causes of death. The gases are the product of the imperfect combustion of hydrocarbons, and the worse the combustion the greater will be the output of CO, which with CO_2 constitutes the bulk of the fumes. A dangerous concentration—according to some experiments 1 in 1500—may easily be reached in narrow lanes, corners, and roofed spaces. When an engine is run in a small closed shed it produces a high concentration at once, especially if the carburetter air vent is closed or nearly so. As much as 11 per cent. is reached in a few minutes, but before this occurs the driver, if he has been imprudent enough to shut himself in with the car, is dead. Even coal gas, at its worst, contains no more than 5 to 10 per cent. of CO, and no one would stay in a kitchen with unlighted gas streaming from the oven jets, but he would be safe there compared with the car owner working on a running engine in a small garage. CO is the deadlier for being odourless and colourless. A concentration of 1 in 1000 or 1 in 2000 will saturate the blood in an hour or less to the 60 per cent. or so at which death occurs. Even as minute a trace in the atmosphere as 1 in 5000 will produce headache, malaise, and unsteadiness of the legs in two to three hours. As might be expected, therefore, 3 per cent. will produce symptoms of acute poisoning in a quarter of an hour, and less if the subject is working hard. The safety limit in American mines is held to be 1 in 5000. Besides poisoning the air, a running engine quickly uses up the oxygen. The concentration is heaviest at first just at the end of the exhaust pipe, and the owner moving to and fro stirs the mixture. He notices nothing for a time, but then suddenly, especially if he happens to take a deep breath of an extra strong concentration, he feels a violent headache, a loss of balance, and a deadly weakness at the knees. His efforts to breathe make matters worse, and, sinking to the floor where the fumes are heaviest, he soon succumbs. Many professional drivers are familiar with the beginning of this syndrome, but few treat it with the importance it deserves.

Dr. J. Dettling[1], of the Medico-Legal Institute of Zürich University, has been studying the question from the point of view of public security, and has suggested certain precautions which should, if given the status of law, minimise what is undoubtedly a growing public danger. He proposes that every place where cars are stored should have permanent and ample communication with the outside air, such as large unclosable ventilators. This will excite the wrath of owners by forcing them to empty their radiators every night in winter, but that cannot be helped. Further, the running of an engine in a small garage should, he suggests, be absolutely forbidden, as poisoning can occur even with open doors and windows. It should be obligatory to post an official warning in all garages. Real and lasting prophylaxis, however, can only be undertaken by physician, sanitary official, architect, motorist, and chemist working in coöperation.

SANOCRYSIN IN PULMONARY TUBERCULOSIS.

A PAPER on the immediate results of treating pulmonary tuberculosis with sanocrysin appears in the *Semana Medica* of Oct. 7th. The authors, Dr. E. M. F. Rey, Dr. F. E. Boneo, and Dr. Priam, give the results of treatment in fifty cases which had not been benefited by previous care in a sanatorium. They are not very enthusiastic about the results, which, they say, were "not so favourable as they could have wished." Of the 50 treated, 33 improved, whose state without sanocrysin might have remained stationary or got worse; 12 remained the same, 3 died, and 2 were worse. On their face value these figures appear satisfactory, and justify the authors' opinion that sanocrysin, with other gold preparations, should be considered as a weapon in the antituberculous armoury, pending further improvements in their preparation and use. They mention a case of acute miliary tuberculosis in which "unexpected results" followed treatment, but they give no details, and unfortunately do not include a description of it in their list.

[1] Schweiz. Woch., August 26th, p. 832.

PRACTICAL JOKES WITH COMPRESSED AIR.

WITH the ever-increasing use of high-pressure air for drills, riveters and industrial cleaning, more and more men are being brought in to first-aid stations with rupture of the bowel. Considering the amount of compressed air that is used in this country it is rather surprising that clinical accounts of these accidents all seem to appear in foreign publications. The disaster is generally due to the misguided humour of a fellow worker who has thought that it would be an excellent joke to inflate his unsuspecting companion per rectum. The first case, mentioned by Dr. G. W. Stone, of London, is the only one on record in which the nozzle of the hose was believed actually to have been inserted in the anus. Drs. F. B. Block and M. I. Weissman described a typical case, in the Journal of the American Medical Association for May 22nd, in which the patient had a tear an inch long at the junction of the rectum and sigmoid. The column of air had forced itself through several layers of clothing and the two sphincters although the nozzle was held an inch or more away from the body. Dr. A. W. Andrews[1] gave a reasonable explanation by pointing out that air at a pressure of 100 lb. or over forms a solid column several inches long in front of the nozzle, while the floor of the pelvis, owing to its peculiar construction, constitutes a funnel with the anus at its apex. The involuntary contraction of the levator and sphincter narrows and deepens the funnel, assisting the air to enter the bowel. Moreover, it only requires a pressure of 7 to 12½ lb. to rupture the intestinal wall. The most recent review of the subject appears in the same journal[1] for October last, where Dr. George L. Hays records 32 cases culled from medical literature. No doubt there are many observations which are never reported. Dr. Hays also mentions a report by Petrin[2] of a fatal accident which was caused by a workman trying to shut off pressure by kinking the hose and then holding the end between his teeth. He slipped and relaxed his hold, and the air stream ruptured his œsophagus. The condition of rupture of the bowel is not hard to diagnose, as the abdomen is enormously distended and is tympanitic all over, and the history will reveal the connexion with high-pressure air. It ought to be possible to prevent all but a very few of these accidents by the systematic publication of oral and printed warnings, in which attention is called to the fact that the nozzle of the apparatus need not actually be in contact with the body to produce serious injury. The most effective treatment is emergency puncture and early laparotomy. The sigmoid is usually the site of the rupture, for the anus and rectum escape injury because of their outside support.

COLDS AND CHILL.

SOME years ago Mr. Alexander Francis[3] said that in nine cases out of ten a chill is the exciting cause of an infective catarrh, and suggested that what usually lies behind the chill is an unstable vasomotor system. With such instability, he said, a draught or sudden change of temperature produces a localised vaso-constriction, with a compensatory vaso-dilatation elsewhere. If this area of dilatation happens to be in the mucous membrane of the naso-pharynx or bronchial tubes "it provides, as it were, an incubator for the organisms lurking there, which suddenly bursts into activity and a catarrh results." A similar suggestion has now been put forward in France by Dr. Jean Tarneaud,[4] who, while accepting the infective origin of colds, believes that the causal factor in the vast majority of cases is a shock to the vegetative nervous system caused by a sudden change in temperature. This shock, he considers, causes a reflex vasomotor disturbance of the nasal mucous membrane, which disturbance "allows the infective element to come into play." The arguments put forward in support of his contentions are the general liability to colds at times of sudden change in the weather, the special liability of certain persons to them after any exposure to cold, and the fact that a congestion of the nasal mucous membrane is the invariable first sign of an attack. Dr. Tarneaud claims that the only effective prophylactic treatment is that which aims at lessening the sensitiveness of the nervous system to shock and of the nasal mucosa to vascular disturbances—i.e., general hygiene aiming at desensitisation to cold—and

[1] Surgery, Gynæcology, and Obstetrics, January, 1911, xii., 63.
[2] Beitr. z. Klin. Chir., 1908, lxi., 265.
[3] Brit. Med. Jour., 1919, ii., 223.
[4] Paris Médical, Sept. 4th, 1926.

the local use of the galvano-cautery. The only drugs which are useful, he thinks, are those which affect the vegetative nervous system, such as adrenalin, aconite, and belladonna.

These suggestions are interesting, but it has to be remembered that the local vascular dilatation which these observers believe to be so harmful in favouring the growth and penetration of pathogenic germs is the natural response throughout the body to microbic infection. From this it might be assumed to be a defence rather than a source of weakness, and, in fact, we are taught that the increased secretion helps to wash away germs while the increased blood-supply dilutes the toxins and increases the phagocytic defences. And yet it must be admitted that chronic, as opposed to acute, congestion does favour microbic invasion as the beneficial results of removing such congestion by various local operations testify. Probably there are many different types of cold, from the undoubtedly infectious ones which occur in epidemics to the transient rhinorrhœa which afflicts sensitive people after the slightest chilling. It is the first of these on which emphasis is laid, for example, in Prosser White's monograph on Catarrhal Fevers, whilst the second seems to be the type which has chiefly come under the notice of Dr. Tarneaud.

CONTRACEPTION BY SPERMATOXIN.

Dr. S. S. Rosenfeld, adjunct gynæcologist and obstetrician at the Lebanon Hospital, New York, has carried out some interesting experiments on the production of a spermatoxin in human beings immunised with injections of living spermatozoa. The preliminary report appears in the *American Journal of Obstetrics and Gynecology* (vol. xii., No. 3). Three women received repeated injections of human semen, but in no case was a spermatoxic reaction subsequently demonstrable in the serum. Negative results were obtained after the use of both living and dead spermatozoa. It has, of course, been claimed that women who have been injected with semen can avert pregnancy for about 20 months, the temporary sterility being due to the production in their blood of a spermatoxic antibody. If this is correct a new contraceptive method would become available for women in whom pregnancy is contra-indicated. Dr. Rosenfeld's results appear, however, to throw doubt on these statements. At any rate in the light of his experience many injections of semen would appear to be necessary in order to obtain a temporary sterility, so that as a practical contraceptive method immunisation with injections of semen need not be considered very seriously.

AN INSURANCE COMPANY'S NURSING SERVICE.

IN 1924 the Mutual Property Insurance Company, Ltd., of London, instituted a free nursing service for the benefit of its sickness and accident policy-holders. These people, who are mainly of the industrial classes, received attention and advice at the hands of a nursing sister, who visited her patients by car. As more and more patients began to take advantage of the service, it was found impossible for a single visiting nurse to carry on the work. In April, therefore, the service was reorganised, and the policy-holders, instead of receiving visits from the Company's nurse, are now attended by members of 96 district nursing associations with which the Company has become affiliated. The cost of the visits is entirely defrayed by the Company, and the policy-holders naturally receive more prompt attention than was formerly possible.

Since this nursing service was started in 1924, nearly 9000 visits have been made; the fact that 1100 of these were made during September last shows that the scheme is growing in its scope. In connexion with this welfare work, the Mutual Property Insurance Company has distributed over 300,000 folders and leaflets dealing with personal health.

COÖPERATIVE BABY CARE.

THE little book, "To Wives and Mothers," published by the National League for Health, Maternity, and Child Welfare, has long been recognised as a useful guide in the daily task of caring for children and in facing the common difficulties which arise in most homes where there is a young family. The eighth edition has just been published under the new title "To Mothers and Fathers."[1] As the new chapter on a Father's Duty only occupies two and a half pages, it is evidently intended that the father, equally with the mother, should acquaint himself with the earlier chapters; he is indeed specially recommended to study the section on the expectant mother, to make sure that all proper precautions are being taken and preparations made for the safeguarding of his wife and the coming child. His responsibility in giving the baby the best chance, by keeping the rules of the game, is also emphasised, as in the sentence: "Regular feeding will only be possible if you help; if you are out with your wife you must make it your duty to bring her home in time for baby's feed."

The preface expressly states that the booklet is not designed to replace medical and other expert advice available at a welfare centre, but it contains in its 79 pages a remarkable amount of homely counsel on the well-being of the expectant and nursing mother, on many aspects of child-care up to the age of 5, and on home management, as well as sound hints on the nursing of various illnesses, and the avoidance of spreading infection. The table on p. 64, setting out the period of incubation, of quarantine, and the time when the patient may be regarded as free from infection after the commonest infectious diseases, is especially useful. The few misprints scarcely mar a well-balanced and carefully compiled pamphlet.

[1] To Mothers and Fathers. How to Keep Yourselves and Your Children Well and Strong. National League for Health, Maternity and Child Welfare, 117, Piccadilly, London, W. 1. 6*d.*, post free.

WEIGHTS AND MEASURES.

To the Editor of THE LANCET.

SIR,—Old table books tell us that apothecaries mix their medicines by apothecaries' weight, but buy and sell their drugs by avoirdupois weight. The apothecaries' *drachm* is 60 grains, and the avoirdupois *dram* 27½ grains; the apothecaries' ounce 480 grains (precisely the weight of 5*s.* 6*d.* in silver); the avoirdupois ounce 437½ grains (practically the weight of 5*s.* in silver). If a scruple is asked for, it is distinctly 20 grains (practically the weight of a 3*d.* bit); but if a drachm or dram (the sound is the same) or an ounce is demanded, what is supplied over the counter, retail or wholesale? If the demand is in writing, and the apothecaries' symbol for drachm or ounce prefixed, I presume that 60 or 480 grains are supplied, and if dr. or oz. is prefixed, 27½ or 437½ grains are supplied. But where ambiguity arises, is it left to the discretion of the server how many grains to supply? I have been told that the British Pharmacopœia of 1864 changed the weights and measures from apothecaries' to imperial, and that the apothecaries' symbols were then applied wrongfully to avoirdupois weights and measures.

I am, Sir, yours faithfully,

London, Nov. 5th, 1926. PERTINAX.

A DOUBTFUL COMPLIMENT.

A PHYSICIAN attached to an important hospital sends us the following letter recently received from a patient:—

DEAR SIR,—Please excuse my writing to you, but could you tell me which hospital I could see you at, or the lowest fee you accept. My poor brother came to see you but it cost him £2 2*s.* I could not possibly pay that as I do not possess it. I am suffering something awful with my head particularly when the menses are on. I am a married woman with three children. My husband is a carpenter. I have already undergone an operation for gall-stones, and I pray to God to be able to see you. If only you could tell me this dizziness is due to my liver it would put a new lease on my life. I don't want to see anyone but yourself. After what you said of my brother, I have faith in your very name. I have a bald patch on the left side of my head and it seems as if my head is always in a vice, and it affects my eyes. Four years ago next month, my brother came to see you on a Monday, and died on Friday 6 o'clock in the same week. Hoping and praying you will see me. Thanking you in anticipation. I remain, yours faithfully,

A. B.

PUBLIC HEALTH IN SEYCHELLES.

Mr. J. L. Devaux, Administrator, reports that the population of the colony on Dec. 31st, 1924, was estimated at 25,847, an increase of 1324 since the census of 1921. There were 178 marriages during the year, or 70 more than in 1923. The births number 723, corresponding to a rate of 29·97 per 1000. The deaths totalled 378, or 14·62 per 1000. The estimated number of square miles comprised in the Seychelles islands and dependencies is 156¼. Mahé is the largest and most populous island and is distant from Mauritius 934, from Madagascar 600, and from Zanzibar 970 miles. It is mountainous, fertile, and has an area of about 55 square miles. The climate is quite healthy, and, owing to the absence of the anopheline mosquito, malaria does not occur. The maximum shade temperature rarely exceeds 86°, but even at night the temperature seldom falls below 74°. The rainfall averages about 90 inches, although in some years it has reached 115 inches.

Corrigendum.—In the discussion on the Management of Contracted Pelvis at the Harveian Society (THE LANCET, Nov. 13th, p. 1010), Dr. G. de Bec Turtle should have been reported as saying that Walcher's position was of some value in increasing the size of the *inlet* in cases of flat pelvis, and that in the high forceps operation it was best to remove the instruments after bringing the head down *into the pelvic cavity*.